

## LINE UP

| カタログ番号       | 系統名     | 病理組織所見                                                                               | 移植タイプ | 掲載ページ |
|--------------|---------|--------------------------------------------------------------------------------------|-------|-------|
| F_PDX_000053 | DLUN001 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 2     |
| F_PDX_000054 | DLUN002 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 6     |
| F_PDX_000055 | DLUN003 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 10    |
| F_PDX_000056 | DLUN004 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 14    |
| F_PDX_000057 | DLUN005 | Small cell carcinoma<br>小細胞がん                                                        | 直接    | 18    |
| F_PDX_000058 | DLUN006 | Papillary adenocarcinoma<br>乳頭型腺がん                                                   | 直接    | 22    |
| F_PDX_000059 | DLUN007 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 26    |
| F_PDX_000060 | DLUN008 | Squamous cell carcinoma<br>扁平上皮がん                                                    | 直接    | 30    |
| F_PDX_000061 | DLUN009 | Adenocarcinoma<br>腺がん                                                                | 間接    | 34    |
| F_PDX_000159 | DLUN010 | Keratinizing squamous cell carcinoma<br>角化型扁平上皮がん                                    | 間接    | 38    |
| F_PDX_000160 | DLUN011 | Adenosquamous carcinoma<br>腺扁平上皮がん                                                   | 間接    | 42    |
| F_PDX_000161 | DLUN012 | Colloid adenocarcinoma<br>コロイド腺がん                                                    | 間接    | 46    |
| F_PDX_000162 | DLUN013 | Undifferentiated carcinoma<br>未分化がん                                                  | 間接    | 50    |
| F_PDX_000163 | DLUN014 | Papillary adenocarcinoma<br>乳頭型腺がん                                                   | 間接    | 54    |
| F_PDX_000164 | DLUN015 | Adenocarcinoma<br>腺がん                                                                | 直接    | 58    |
| F_PDX_000211 | DLUN016 | Undifferentiated carcinoma<br>未分化がん                                                  | 間接    | 62    |
| F_PDX_000212 | DLUN017 | Poorly differentiated adenocarcinoma or undifferentiated carcinoma<br>低分化腺がんまたは未分化がん | 間接    | 66    |
| F_PDX_000213 | DLUN018 | Adenocarcinoma<br>腺がん                                                                | 間接    | 70    |
| F_PDX_000214 | DLUN019 | Adenocarcinoma<br>腺がん                                                                | 間接    | 74    |
| F_PDX_000215 | DLUN020 | Colloid adenocarcinoma<br>コロイド腺がん                                                    | 間接    | 78    |
| F_PDX_000216 | DLUN021 | Adenocarcinoma<br>腺がん                                                                | 間接    | 82    |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 12 日

増殖速度 4.6 mm<sup>3</sup>/day

病理組織所見 扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺)

性別 男性

年齢 67 歳

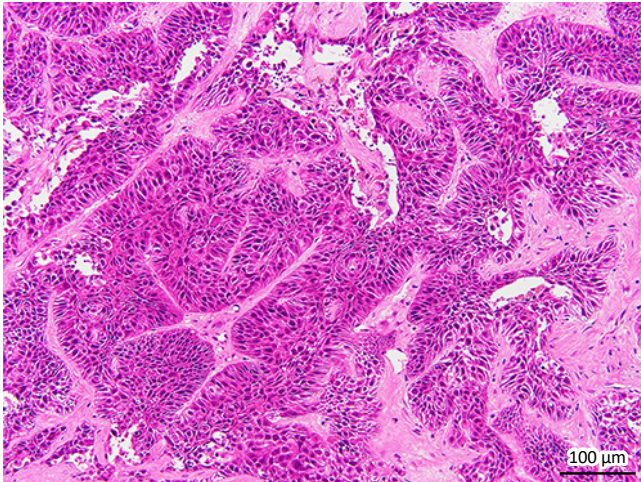
入手先 日本

病理組織所見 類基底細胞型扁平上皮がん

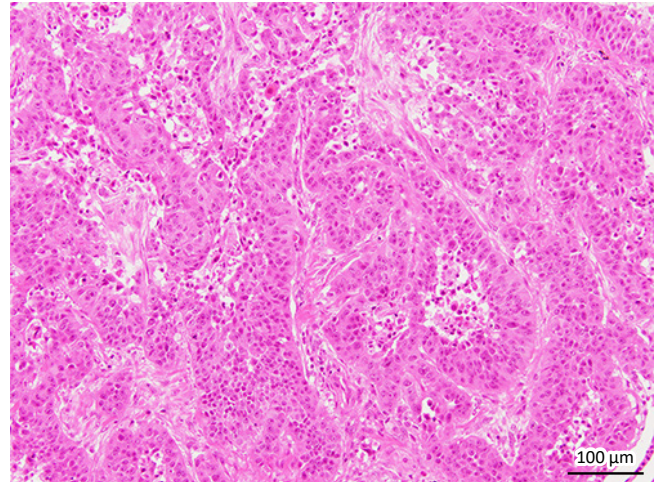
F-PDO系統

## 病理組織像

## F-PDX®

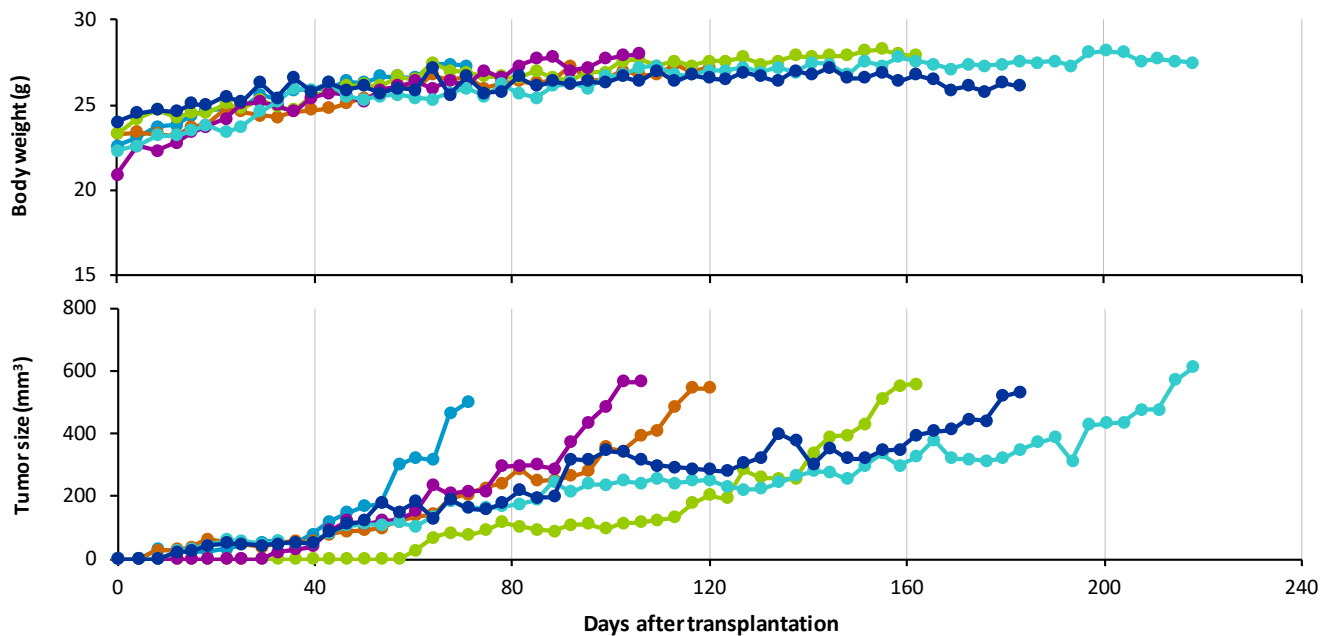


## 元腫瘍



## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



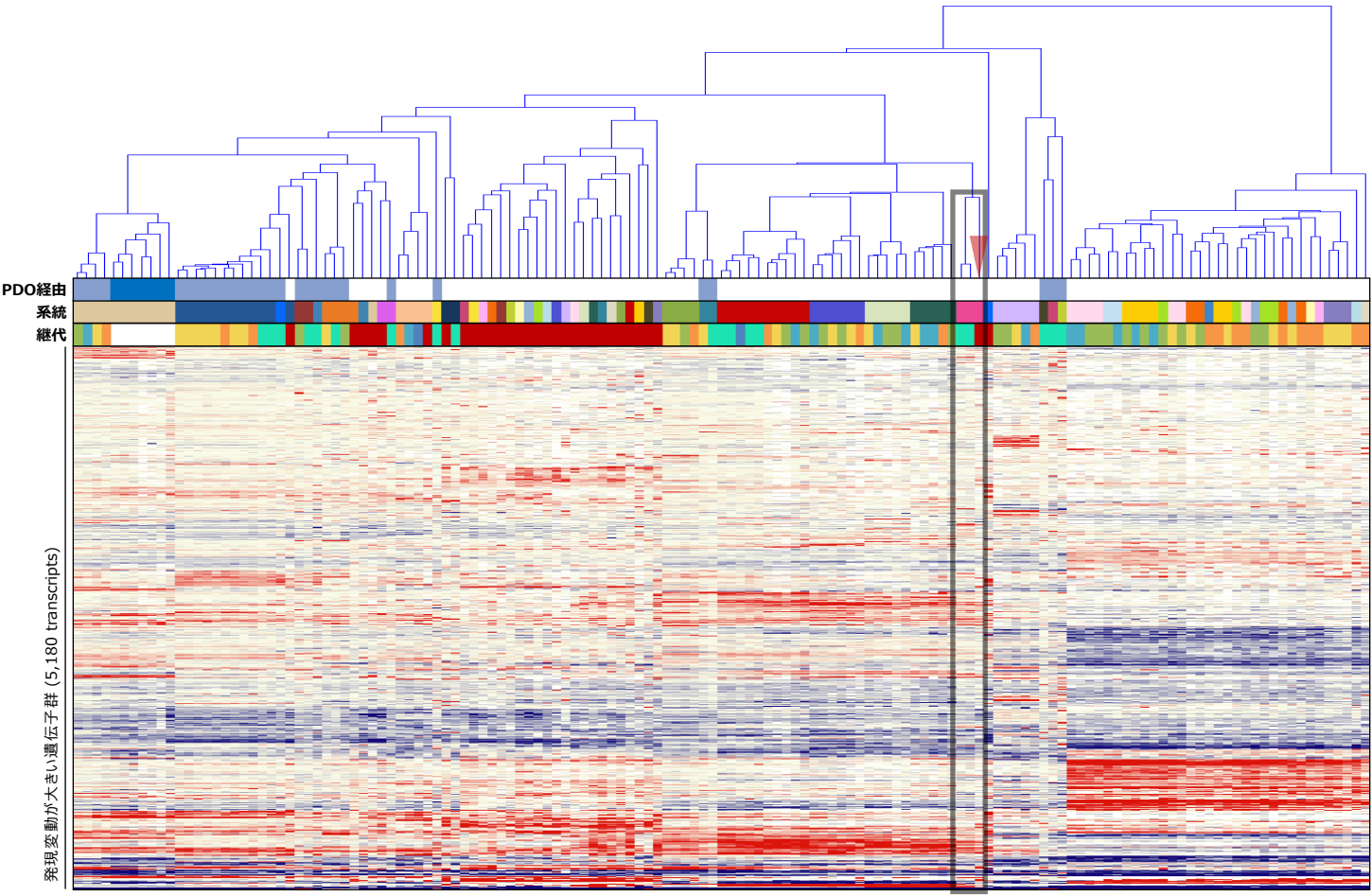
網羅的遺伝子発現解析 (クラスタ分析) による評価



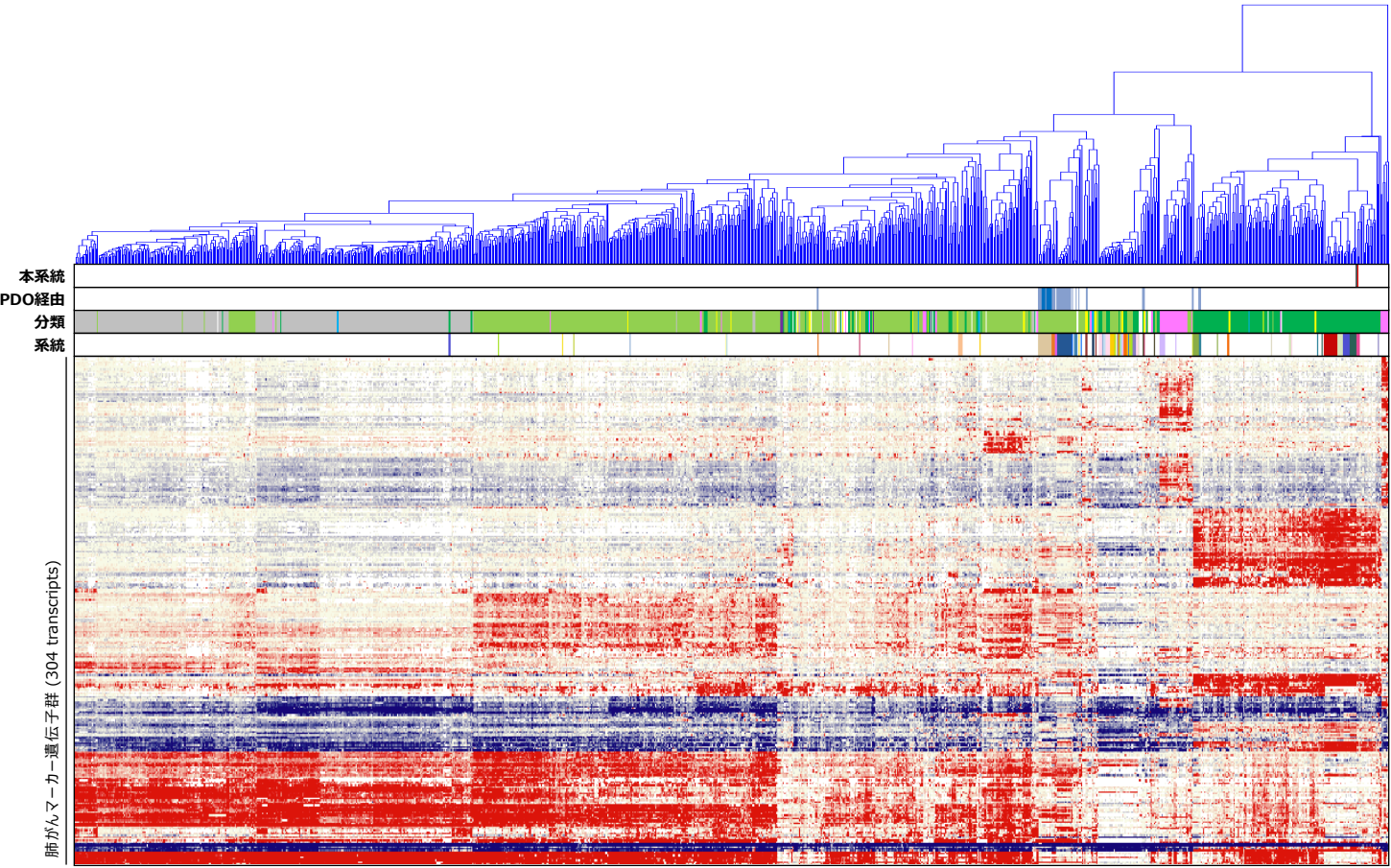
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN001 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN001 DLUN001 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



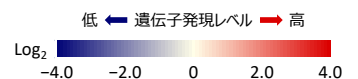
肺がん由来サンプル (1,082 samples)



## がん関連遺伝子の発現プロファイル

| Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene   | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|--------------|-----|-----|---------|-----|-----|----------|-----|-----|--------|-----|-----|----------|-----|-----|---------|-----|-----|
|              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |        | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| ABCB1        |     |     | CDK4    |     |     | FAS      |     |     | INHBA  |     |     | MYD88    |     |     | PRKCI   |     |     |
| ABCC2        |     |     | CDK8    |     |     | FAT1     |     |     | INPP4B |     |     | MYH9     |     |     | PRKDC   |     |     |
| ABL1         |     |     | CDK12   |     |     | FBXW7    |     |     | INSR   |     |     | MYH11    |     |     | PRSS8   |     |     |
| ABL2         |     |     | CDKN1A  |     |     | FGF3     |     |     | IRF4   |     |     | NBN      |     |     | PSIP1   |     |     |
| ACTB         |     |     | CDKN1B  |     |     | FGF4     |     |     | IRS2   |     |     | NCOA1    |     |     | PSMB1   |     |     |
| ACVR1B       |     |     | CDKN2C  |     |     | FGF10    |     |     | ITGA9  |     |     | NCOA2    |     |     | PSMB2   |     |     |
| ACVR2A       |     |     | CEBPA   |     |     | FGF14    |     |     | ITGA10 |     |     | NCOA4    |     |     | PSMB5   |     |     |
| ADGRA2       |     |     | CHD7    |     |     | FGF19    |     |     | ITGB2  |     |     | NELL2    |     |     | PSMD1   |     |     |
| ADGRB3       |     |     | CHEK1   |     |     | FGF23    |     |     | ITGB3  |     |     | NF1      |     |     | PSMD2   |     |     |
| AFF1         |     |     | CHEK2   |     |     | FGFR2    |     |     | JAK1   |     |     | NF2      |     |     | PTCH1   |     |     |
| AFF3         |     |     | CHIC2   |     |     | FGR      |     |     | JAK2   |     |     | NFE2L2   |     |     | PTGS2   |     |     |
| AKT1         |     |     | CKS1B   |     |     | FH       |     |     | JAK3   |     |     | NFKB1    |     |     | PTPN11  |     |     |
| AKT2         |     |     | CMPK1   |     |     | FLCN     |     |     | JUN    |     |     | NFKB2    |     |     | PTPRD   |     |     |
| AKT3         |     |     | COL1A1  |     |     | FLI1     |     |     | KAT6B  |     |     | NFKBIA   |     |     | PTPRT   |     |     |
| ALK          |     |     | CRBN    |     |     | FLT1     |     |     | KDR    |     |     | NKX2-1   |     |     | QKI     |     |     |
| AR           |     |     | CREB1   |     |     | FLT3     |     |     | KEAP1  |     |     | NLRP1    |     |     | RAC1    |     |     |
| ARAF         |     |     | CREBBP  |     |     | FLT4     |     |     | KEL    |     |     | NOTCH2   |     |     | RAD50   |     |     |
| ARFRP1       |     |     | CRLF2   |     |     | FOXL2    |     |     | KIT    |     |     | NOTCH3   |     |     | RAD51   |     |     |
| ARID1A       |     |     | CRTC1   |     |     | FOXO1    |     |     | KLF4   |     |     | NOTCH4   |     |     | RAD51C  |     |     |
| ARNT         |     |     | CSF1R   |     |     | FOXO3    |     |     | KMT2C  |     |     | NPM1     |     |     | RAF1    |     |     |
| ATF1         |     |     | CTNNA1  |     |     | FOXP1    |     |     | KMT2D  |     |     | NRAS     |     |     | RALGDS  |     |     |
| ATM          |     |     | CTNNB1  |     |     | FRS2     |     |     | KNL1   |     |     | NSD1     |     |     | RANBP2  |     |     |
| ATR          |     |     | CTSV    |     |     | FSTL5    |     |     | LAMA2  |     |     | NSD2     |     |     | RARA    |     |     |
| ATRX         |     |     | CUL3    |     |     | FUBP1    |     |     | LAMP1  |     |     | NTRK1    |     |     | RARG    |     |     |
| AURKA        |     |     | CYLD    |     |     | FZR1     |     |     | LCK    |     |     | NTRK3    |     |     | RB1     |     |     |
| AURKB        |     |     | CYP1A2  |     |     | G6PD     |     |     | LIFR   |     |     | NUMA1    |     |     | RECQL4  |     |     |
| AURKC        |     |     | CYP2C9  |     |     | GABRA6   |     |     | LMO1   |     |     | NUP93    |     |     | REL     |     |     |
| AXIN1        |     |     | CYP2D6  |     |     | GAPDH    |     |     | LPP    |     |     | NUP98    |     |     | RELA    |     |     |
| AXL          |     |     | CYP19A1 |     |     | GATA1    |     |     | LRP1B  |     |     | NUP214   |     |     | RET     |     |     |
| BAG1         |     |     | DAXX    |     |     | GATA2    |     |     | LTF    |     |     | NUTM1    |     |     | RHEB    |     |     |
| BARD1        |     |     | DCC     |     |     | GATA3    |     |     | LTB    |     |     | PARP1    |     |     | RHOA    |     |     |
| BCL2         |     |     | DDB2    |     |     | GDNF     |     |     | LYN    |     |     | PAX3     |     |     | RHOH    |     |     |
| BCL2L1       |     |     | DDIT3   |     |     | GID4     |     |     | MAF    |     |     | PAX5     |     |     | RICTOR  |     |     |
| BCL2L2       |     |     | DDR1    |     |     | GLI1     |     |     | MAFB   |     |     | PAX7     |     |     | RNASEL  |     |     |
| BCL3         |     |     | DDR2    |     |     | GNA11    |     |     | MAGEA1 |     |     | PAX8     |     |     | RNF2    |     |     |
| BCL6         |     |     | DDX3X   |     |     | GNA13    |     |     | MAGI2  |     |     | PBRM1    |     |     | RNF43   |     |     |
| BCL10        |     |     | DEK     |     |     | GNAQ     |     |     | MAGOH  |     |     | PBX1     |     |     | ROS1    |     |     |
| BCL11B       |     |     | DICER1  |     |     | GNAS     |     |     | MALT1  |     |     | PDCD1LG2 |     |     | RPLP0   |     |     |
| BCOR         |     |     | DOT1L   |     |     | GRB7     |     |     | MAML2  |     |     | PDE4DIP  |     |     | RPS6KA2 |     |     |
| BCR          |     |     | DPYD    |     |     | GRIN2A   |     |     | MAP2K1 |     |     | PDGFB    |     |     | RPS6KB1 |     |     |
| BIRC3        |     |     | DST     |     |     | GRM3     |     |     | MAP2K2 |     |     | PDGFRA   |     |     | RRM1    |     |     |
| BIRC5        |     |     | EGFR    |     |     | GRM8     |     |     | MAP2K4 |     |     | PDGFRB   |     |     | RSP02   |     |     |
| BLM          |     |     | EMSY    |     |     | GSK3B    |     |     | MAP3K1 |     |     | PDK1     |     |     | RSP03   |     |     |
| BLNK         |     |     | EPHA3   |     |     | GSTP1    |     |     | MAP3K7 |     |     | PER1     |     |     | RUNX1   |     |     |
| BMPRI1A      |     |     | EPHA5   |     |     | GUCY1A2  |     |     | MAPK1  |     |     | PGAP3    |     |     | RXRA    |     |     |
| BORCS8-MEF2B |     |     | EPHA7   |     |     | GUSB     |     |     | MAPK8  |     |     | PGR      |     |     | RXRB    |     |     |
| BRCA1        |     |     | EPHB1   |     |     | H3F3A    |     |     | MARK4  |     |     | PHF6     |     |     | RXRG    |     |     |
| BRCA2        |     |     | EPHB4   |     |     | HCAR1    |     |     | MAX    |     |     | PHOX2B   |     |     | SAMD9   |     |     |
| BRIP1        |     |     | EPHB6   |     |     | HGF      |     |     | MBD1   |     |     | PIK3CA   |     |     | SBDS    |     |     |
| BTG1         |     |     | ERBB2   |     |     | HIF1A    |     |     | MCL1   |     |     | PIK3CD   |     |     | SCUBE2  |     |     |
| BTK          |     |     | ERBB3   |     |     | HLF      |     |     | MDM4   |     |     | PIK3CG   |     |     | SDHA    |     |     |
| BUB1B        |     |     | ERBB4   |     |     | HNF1A    |     |     | MED12  |     |     | PIK3R1   |     |     | SDHB    |     |     |
| CARD11       |     |     | ERCC1   |     |     | HRAS     |     |     | MED13  |     |     | PIK3R2   |     |     | SDHC    |     |     |
| CASP8        |     |     | ERCC2   |     |     | HSP90AA1 |     |     | MITF   |     |     | PIK3R5   |     |     | SDHD    |     |     |
| CBFB         |     |     | ERCC5   |     |     | HSP90AB1 |     |     | MKI67  |     |     | PIM1     |     |     | SEPT9   |     |     |
| CCNB1        |     |     | ERG     |     |     | ICK      |     |     | MMP2   |     |     | PLAG1    |     |     | SF3B1   |     |     |
| CCND2        |     |     | ERRF1   |     |     | IDH1     |     |     | MMP1   |     |     | PLCG1    |     |     | SGK1    |     |     |
| CCND3        |     |     | ESR1    |     |     | IDH2     |     |     | MN1    |     |     | PLCG2    |     |     | SH2D1A  |     |     |
| CCNE1        |     |     | ETS1    |     |     | IGF1R    |     |     | MPL    |     |     | PLEKHG5  |     |     | SHH     |     |     |
| CD68         |     |     | ETV1    |     |     | IGF2R    |     |     | MSH2   |     |     | PMS1     |     |     | SHOC2   |     |     |
| CD79A        |     |     | ETV4    |     |     | IKBK     |     |     | MSH6   |     |     | POLD1    |     |     | SLC22A1 |     |     |
| CD274        |     |     | ETV5    |     |     | IKZF1    |     |     | MST1R  |     |     | POLE     |     |     | SLC22A2 |     |     |
| CDA          |     |     | ETV6    |     |     | IL2      |     |     | MTR    |     |     | POU5F1   |     |     | SLC31A1 |     |     |
| CDC73        |     |     | EXT1    |     |     | IL2RA    |     |     | MTRR   |     |     | PPARG    |     |     | SLC34A2 |     |     |
| CDH1         |     |     | EXT2    |     |     | IL2RB    |     |     | MUC1   |     |     | PPP2R1A  |     |     | SLC45A3 |     |     |
| CDH2         |     |     | EZH2    |     |     | IL2RG    |     |     | MYB    |     |     | PRDM1    |     |     | SLCO1B1 |     |     |
| CDH5         |     |     | FANCA   |     |     | IL6ST    |     |     | MYBL1  |     |     | PREX2    |     |     | SLIT2   |     |     |
| CDH11        |     |     | FANCC   |     |     | IL7R     |     |     | MYBL2  |     |     | PRKACA   |     |     | SMAD2   |     |     |
| CDH20        |     |     | FANCI   |     |     | IL21R    |     |     | MYC    |     |     | PRKACB   |     |     | SMAD4   |     |     |
| CDK2         |     |     | FANCL   |     |     | ING4     |     |     | MYCN   |     |     | PRKAR1A  |     |     | SMARCA4 |     |     |

【遺伝子発現プロファイル】





臨床情報

F\_PDX\_000053

|                |                            |         |                  |         |   |
|----------------|----------------------------|---------|------------------|---------|---|
| 臨床情報シート区分      |                            | 肺腫瘍     |                  |         |   |
| 性 別            | 男                          | 年 齢     | 67 歳             | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span> |         |                  |         |   |
|                | 病理診断名                      |         | 診断コード            |         |   |
|                | 類基底細胞型扁平上皮がん               |         | L2.2.3           |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                   | T4      |                  |         |   |
|                | 所属リンパ節 (N)                 | N0      |                  |         |   |
|                | 遠隔転移 (M)                   | M0      |                  |         |   |
|                | ステージ                       | III     | ( IIIA )         |         |   |
|                | 分化度 (G)                    | G2      |                  |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                | ly1     | 気管支断端 (br) 陰性(-) |         |   |
|                | 血管浸潤 (v)                   | v3      | 胸膜ブランク(Plq) plg0 |         |   |
|                | 胸膜浸潤 (pl)                  | pl3     | (心膜)             |         |   |
|                | 肺内転移 (pm)                  | pm0     |                  |         |   |
|                | 胸水/胸腔洗浄液                   | CLASS I |                  |         |   |
|                |                            |         |                  |         |   |
| 免疫組織学的<br>検 査  |                            |         |                  |         |   |
| 既 往 歴          | 胃がん, 心疾患                   |         |                  |         |   |
| 放射線療法歴         |                            |         |                  |         |   |
| 薬剤治療歴          |                            |         |                  |         |   |
| 喫 煙 歴          | あり (過去)                    |         |                  |         |   |
| 飲 酒 歴          | なし                         |         |                  |         |   |
| 特 記 事 項        |                            |         |                  |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 18 日

増殖速度 11.6 mm<sup>3</sup>/day

病理組織所見 扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺)

性別 男性

年齢 62 歳

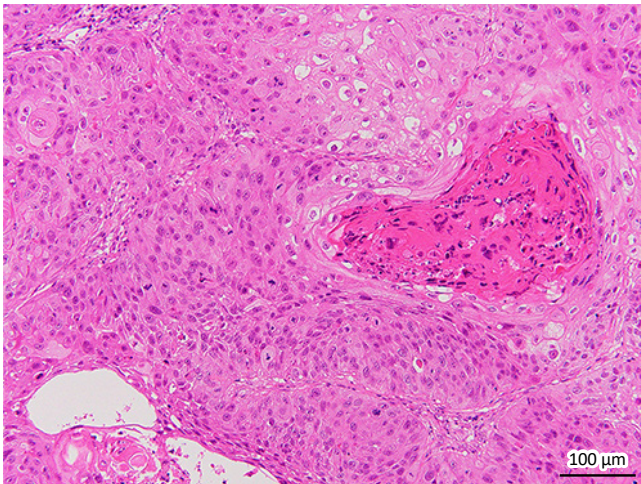
入手先 日本

病理組織所見 扁平上皮がん

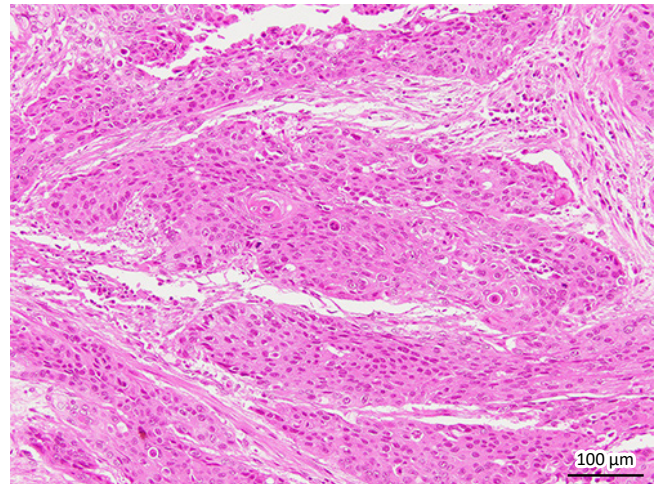
F-PDO系統

## 病理組織像

## F-PDX®

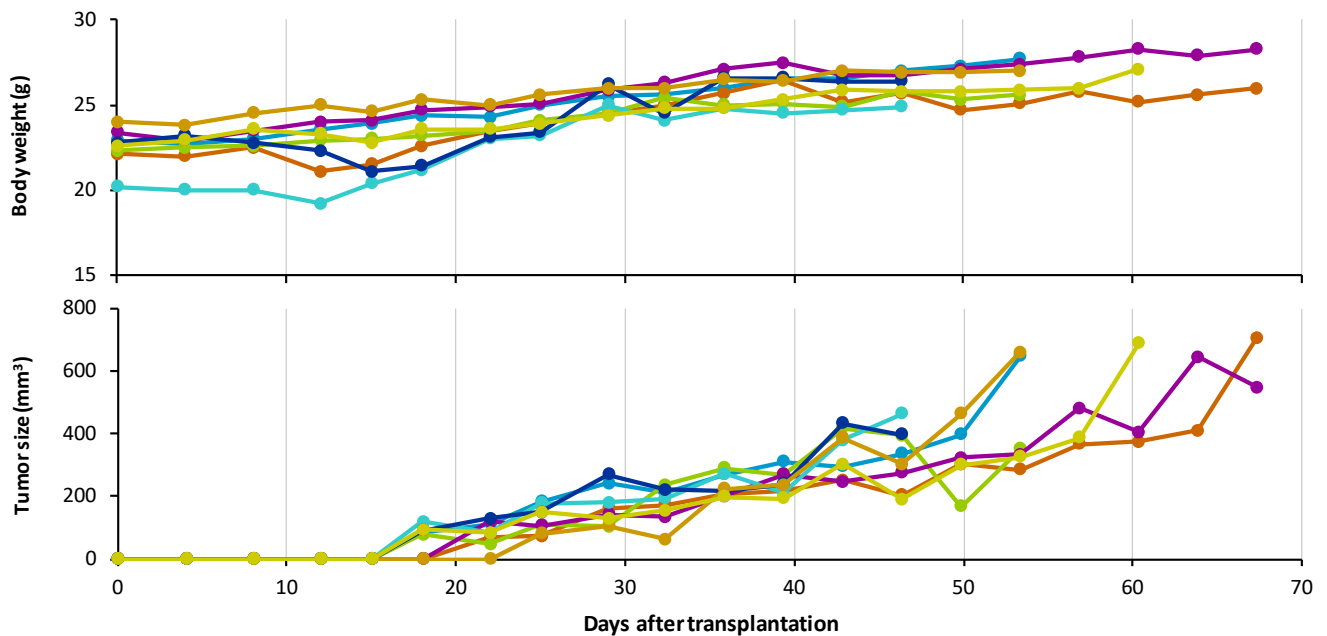


## 元腫瘍

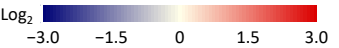


## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



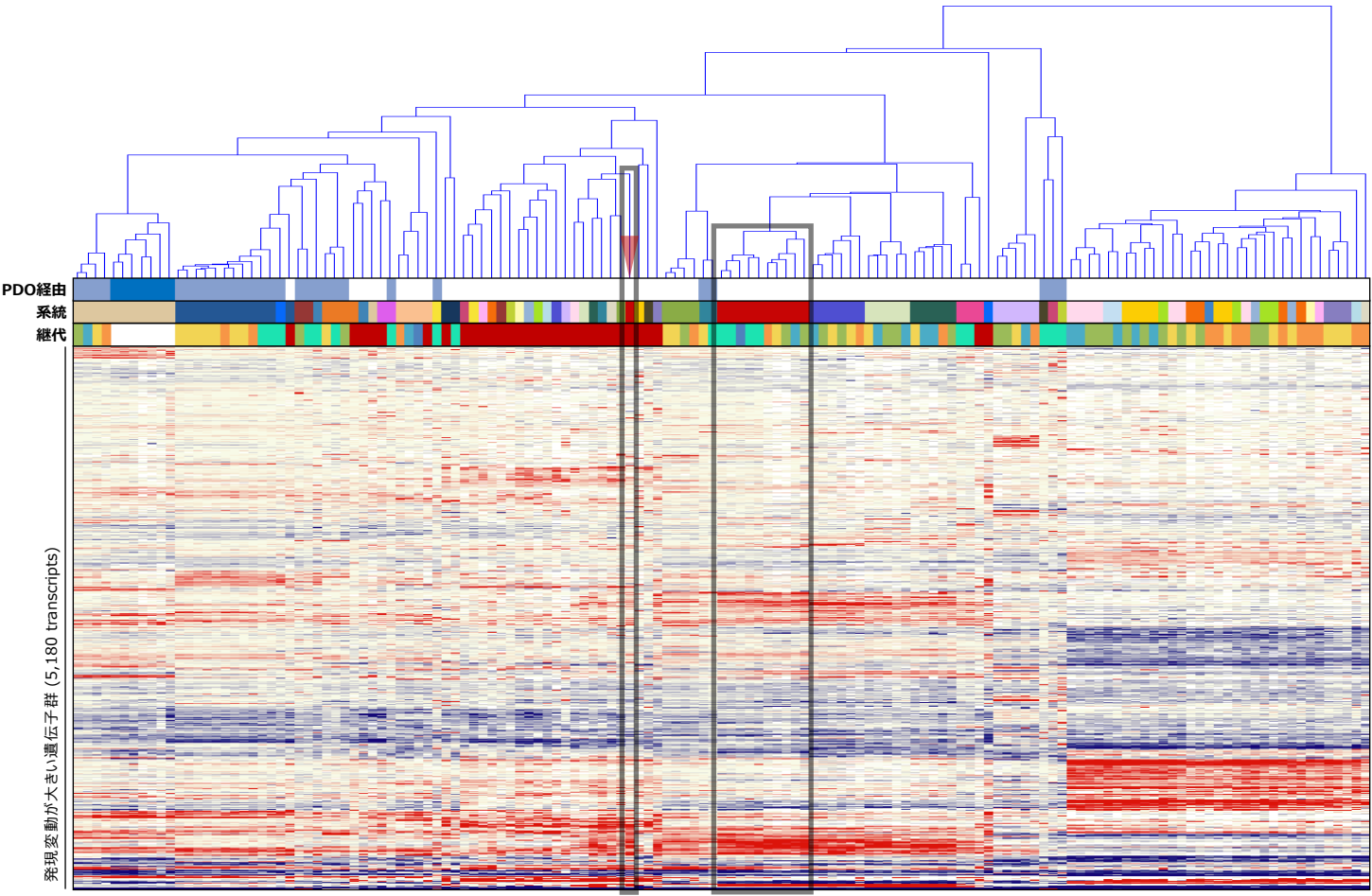
網羅的遺伝子発現解析 (クラスタ分析) による評価



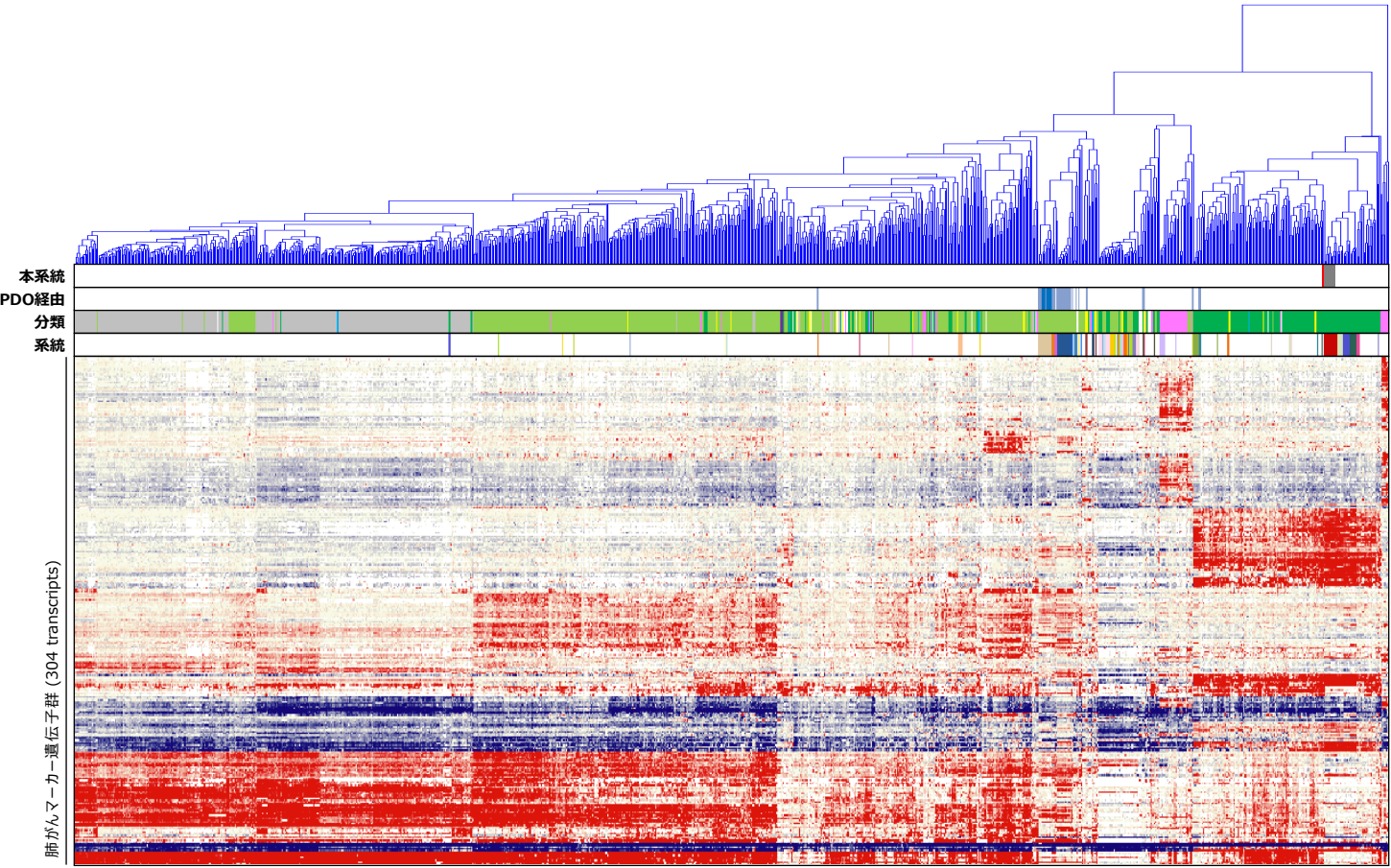
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN002 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN002 DLUN002 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CNCE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CND2         |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000054

|                |                                                   |         |         |         |   |
|----------------|---------------------------------------------------|---------|---------|---------|---|
| 臨床情報シート区分      |                                                   | 肺腫瘍     |         |         |   |
| 性 別            | 男                                                 | 年 齢     | 62 歳    | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span style="color: orange;">L</span> |         |         |         |   |
|                | 病理診断名                                             |         | 診断コード   |         |   |
|                | 扁平上皮がん                                            |         | L2.2    |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                                          | T1      | ( T1b ) |         |   |
|                | 所属リンパ節 (N)                                        | N1      |         |         |   |
|                | ステージ                                              | II      | ( IIA ) |         |   |
|                | 分化度 (G)                                           | G1      |         |         |   |
|                | (第7版)                                             |         |         |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                       | 陽性(+)   |         |         |   |
|                | 血管浸潤 (v)                                          | 陽性(+)   |         |         |   |
|                | 胸膜浸潤 (pl)                                         | pI0     |         |         |   |
|                | 胸水/胸腔洗浄液                                          | CLASS I |         |         |   |
|                | 気管支断端 (br)                                        | 陽性(+)   |         |         |   |
| 免疫組織学的<br>検 査  |                                                   |         |         |         |   |
| 既 往 歴          | 糖尿病, 高血圧                                          |         |         |         |   |
| 放射線療法歴         |                                                   |         |         |         |   |
| 薬剤治療歴          |                                                   |         |         |         |   |
| 喫 煙 歴          | あり (過去)                                           |         |         |         |   |
| 飲 酒 歴          | あり (習慣性)                                          |         |         |         |   |
| 特 記 事 項        |                                                   |         |         |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 22 日

増殖速度 13.2 mm<sup>3</sup>/day

病理組織所見 扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺)

性別 男性

年齢 68 歳

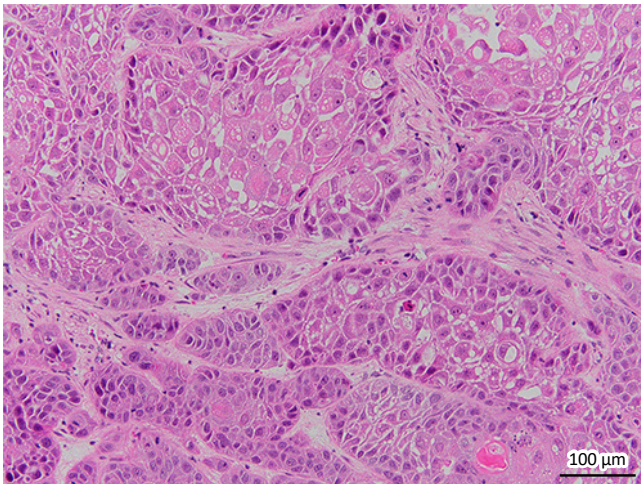
入手先 日本

病理組織所見 扁平上皮がん

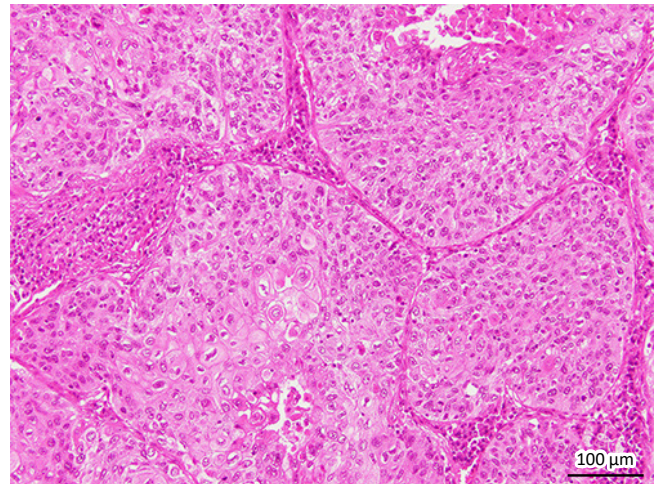
F-PDO系統

## 病理組織像

## F-PDX®

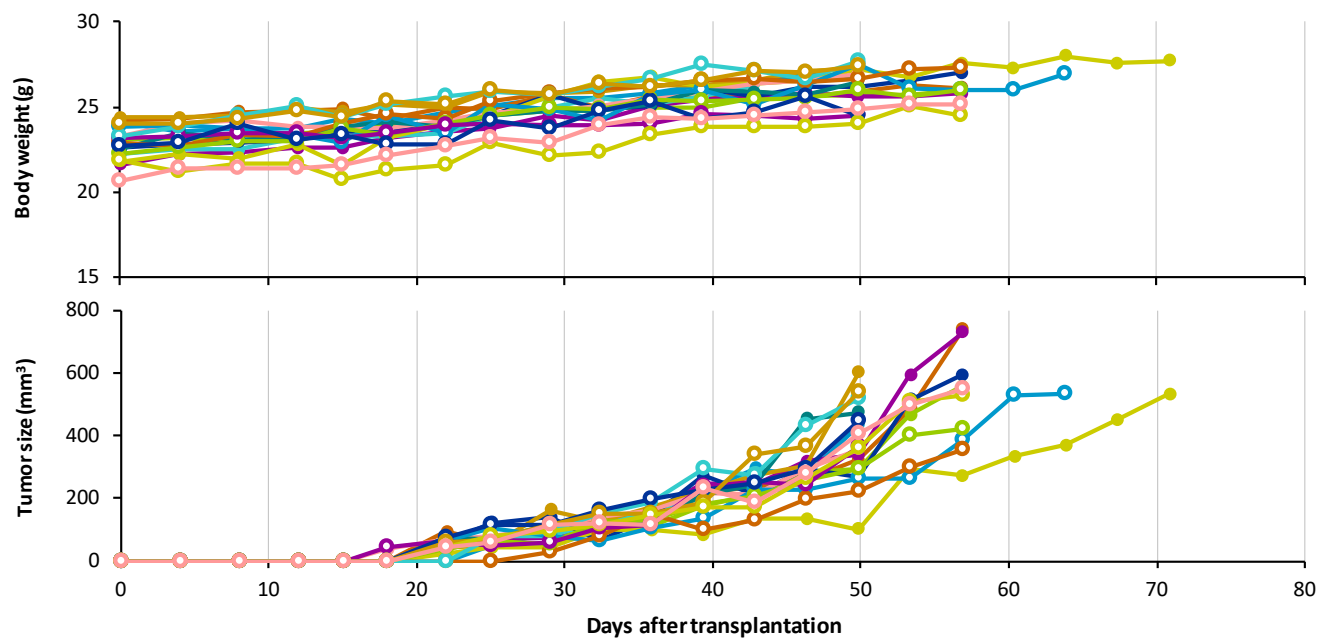


## 元腫瘍



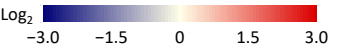
## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





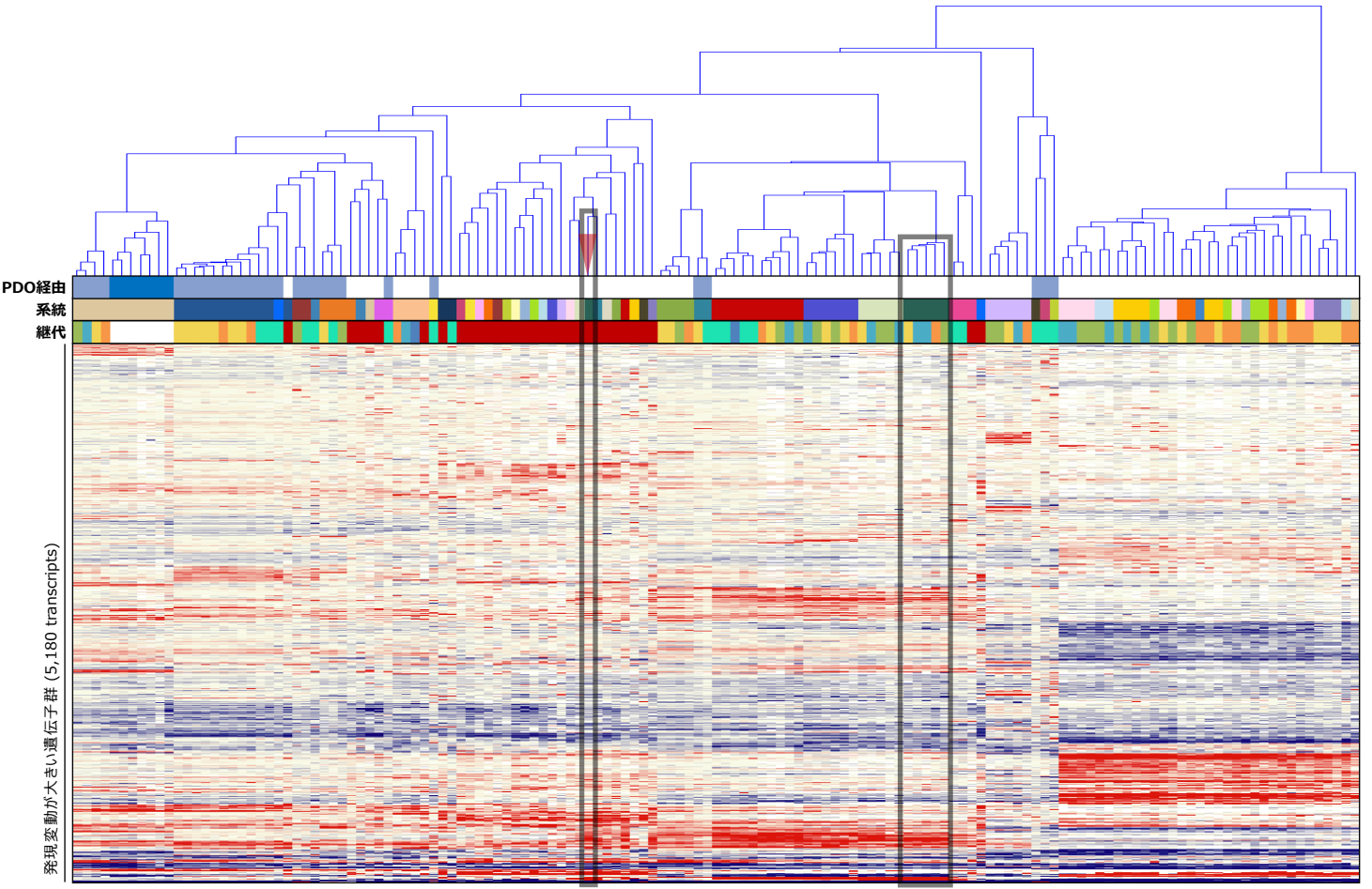
網羅的遺伝子発現解析 (クラスタ分析) による評価



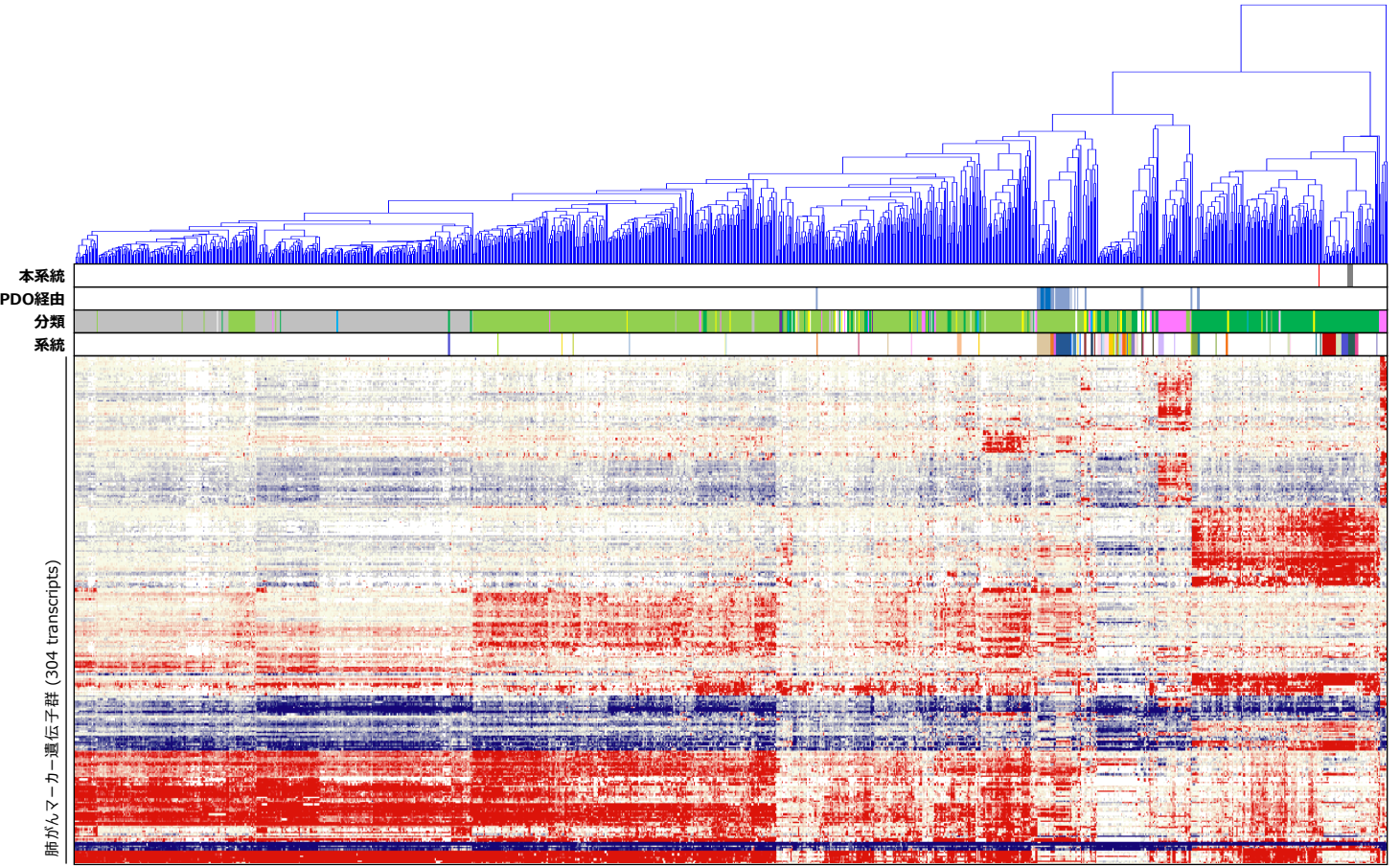
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN003 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN003 DLUN003 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |         |  |  |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|---------|--|--|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |         |  |  |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     | SLC22A2 |  |  |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     | SLC31A1 |  |  |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     | SLC34A2 |  |  |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     | SLC45A3 |  |  |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     | SLCO1B1 |  |  |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     | SLIT2   |  |  |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     | SMAD2   |  |  |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     | SMO     |  |  |
| CNE1     |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     | SOC51   |  |  |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     | SOS1    |  |  |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     | SOX9    |  |  |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     | SOX10   |  |  |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     | SOX11   |  |  |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     | SPRED1  |  |  |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     | SPTA1   |  |  |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     | SRC     |  |  |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     | STAG2   |  |  |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     | STAT1   |  |  |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     | STAT3   |  |  |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     | STAT4   |  |  |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     | STK36   |  |  |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     | SUFU    |  |  |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     | SYK     |  |  |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     | TAF1    |  |  |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     | TAL1    |  |  |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     | TBX22   |  |  |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     | TCF3    |  |  |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     | TCF7L1  |  |  |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     | TCF7L2  |  |  |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     | TCL1A   |  |  |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBKB    |     |     | MYH11    |     |     | RAD51   |     |     | TENT5C  |  |  |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     | TERT    |  |  |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     | TET1    |  |  |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     | TFR3    |  |  |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     | TGFBR2  |  |  |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     | TGM7    |  |  |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     | THBS1   |  |  |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     | TIMP3   |  |  |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     | TLX1    |  |  |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     | TMPRSS2 |  |  |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     | TNFAIP3 |  |  |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     | TNK2    |  |  |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     | TOP1    |  |  |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     | TOP2A   |  |  |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNA5EL  |     |     | TP63    |  |  |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     | TP73    |  |  |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     | TPMT    |  |  |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     | TRAF7   |  |  |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     | TRIM24  |  |  |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     | TSC2    |  |  |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     | TSHR    |  |  |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     | TYK2    |  |  |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     | TYMS    |  |  |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     | UBR5    |  |  |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     | UGT1A1  |  |  |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     | VEGFA   |  |  |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     | VKORC1  |  |  |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     | WAS     |  |  |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     | WISP3   |  |  |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     | XPC     |  |  |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     | XRCC2   |  |  |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     | YES1    |  |  |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     | ZBTB2   |  |  |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     | ZNF217  |  |  |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     | ZNF384  |  |  |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     | ZNF521  |  |  |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     | ZNF703  |  |  |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |         |  |  |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |         |  |  |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |         |  |  |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |         |  |  |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000055

|                |                                                    |         |         |         |   |
|----------------|----------------------------------------------------|---------|---------|---------|---|
| 臨床情報シート区分      |                                                    | 肺腫瘍     |         |         |   |
| 性 別            | 男                                                  | 年 齢     | 68 歳    | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span style="color: #FFA500;">L</span> |         |         |         |   |
|                | 病理診断名                                              |         | 診断コード   |         |   |
|                | 扁平上皮がん                                             |         | L2.2    |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                                           | T2      | (T2a )  |         |   |
|                | 所属リンパ節 (N)                                         | N2      |         |         |   |
|                | 遠隔転移 (M)                                           | M0      |         |         |   |
|                | ステージ                                               | III     | (IIIA ) |         |   |
|                | 分化度 (G)                                            | G1      |         |         |   |
|                | (規約第7版)                                            |         |         |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                        | ly1     |         |         |   |
|                | 血管浸潤 (v)                                           | v1      |         |         |   |
|                | 胸膜浸潤 (pl)                                          | pl1     |         |         |   |
|                | 胸水/胸腔洗浄液                                           | CLASS I |         |         |   |
|                | 気管支断端 (br)                                         | 陰性(-)   |         |         |   |
| 免疫組織学的<br>検 査  |                                                    |         |         |         |   |
| 既 往 歴          | 関節リウマチ, 胃がん, 間質性肺炎                                 |         |         |         |   |
| 放射線療法歴         |                                                    |         |         |         |   |
| 薬剤治療歴          |                                                    |         |         |         |   |
| 喫 煙 歴          | なし                                                 |         |         |         |   |
| 飲 酒 歴          | なし                                                 |         |         |         |   |
| 特 記 事 項        |                                                    |         |         |         |   |



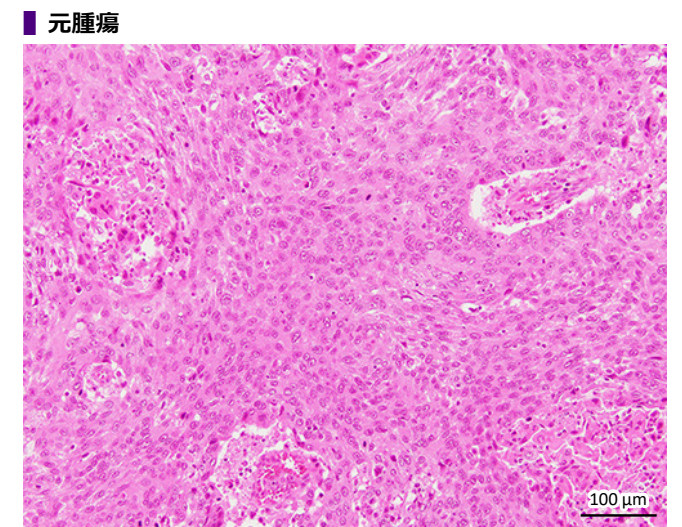
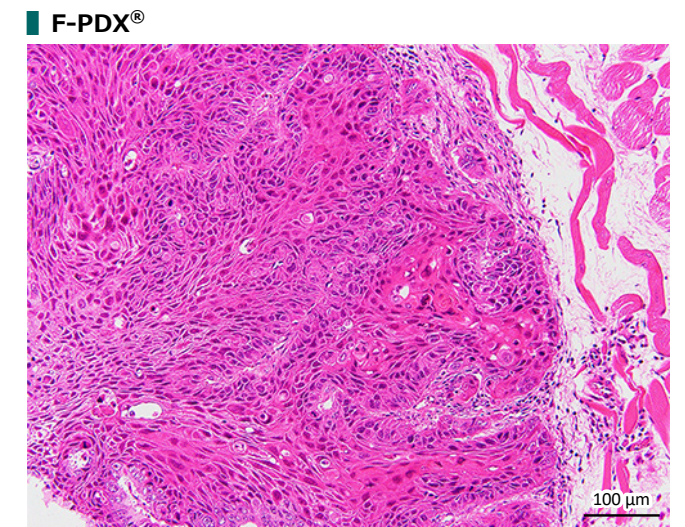
GEP SNV CNV HLA

基本属性

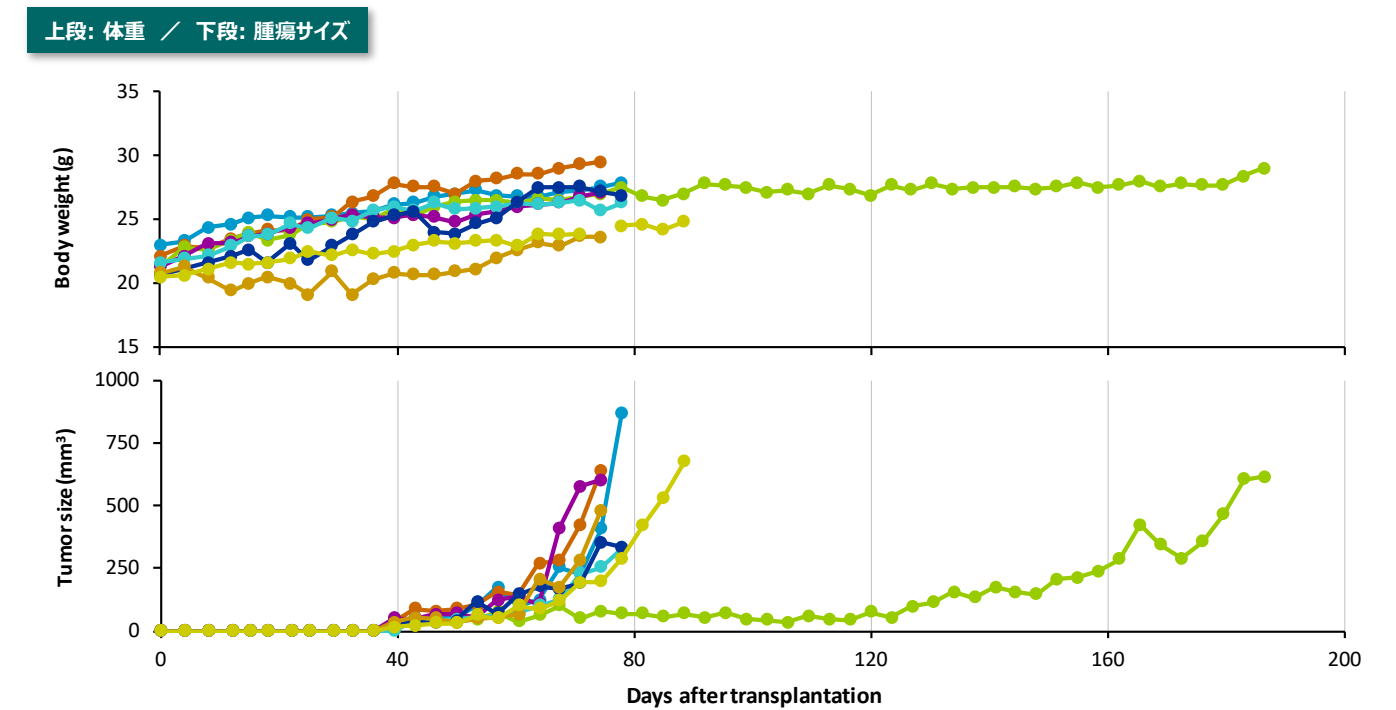
|        |              |      |    |
|--------|--------------|------|----|
| F-PDX® |              |      |    |
| 移植動物系統 | NOG          | 移植部位 | 皮下 |
| 生着日数   | 39 日         |      |    |
| 増殖速度   | 10.6 mm³/day |      |    |
| 病理組織所見 | 扁平上皮がん       |      |    |
| 培養細胞化  |              |      |    |

|         |         |    |      |
|---------|---------|----|------|
| 移植サンプル  |         |    |      |
| 採取部位    | 原発巣 (肺) |    |      |
| 性別      | 男性      | 年齢 | 71 歳 |
| 入手先     | 日本      |    |      |
| 病理組織所見  | 扁平上皮がん  |    |      |
| F-PDO系統 |         |    |      |

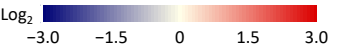
病理組織像



移植後の推移



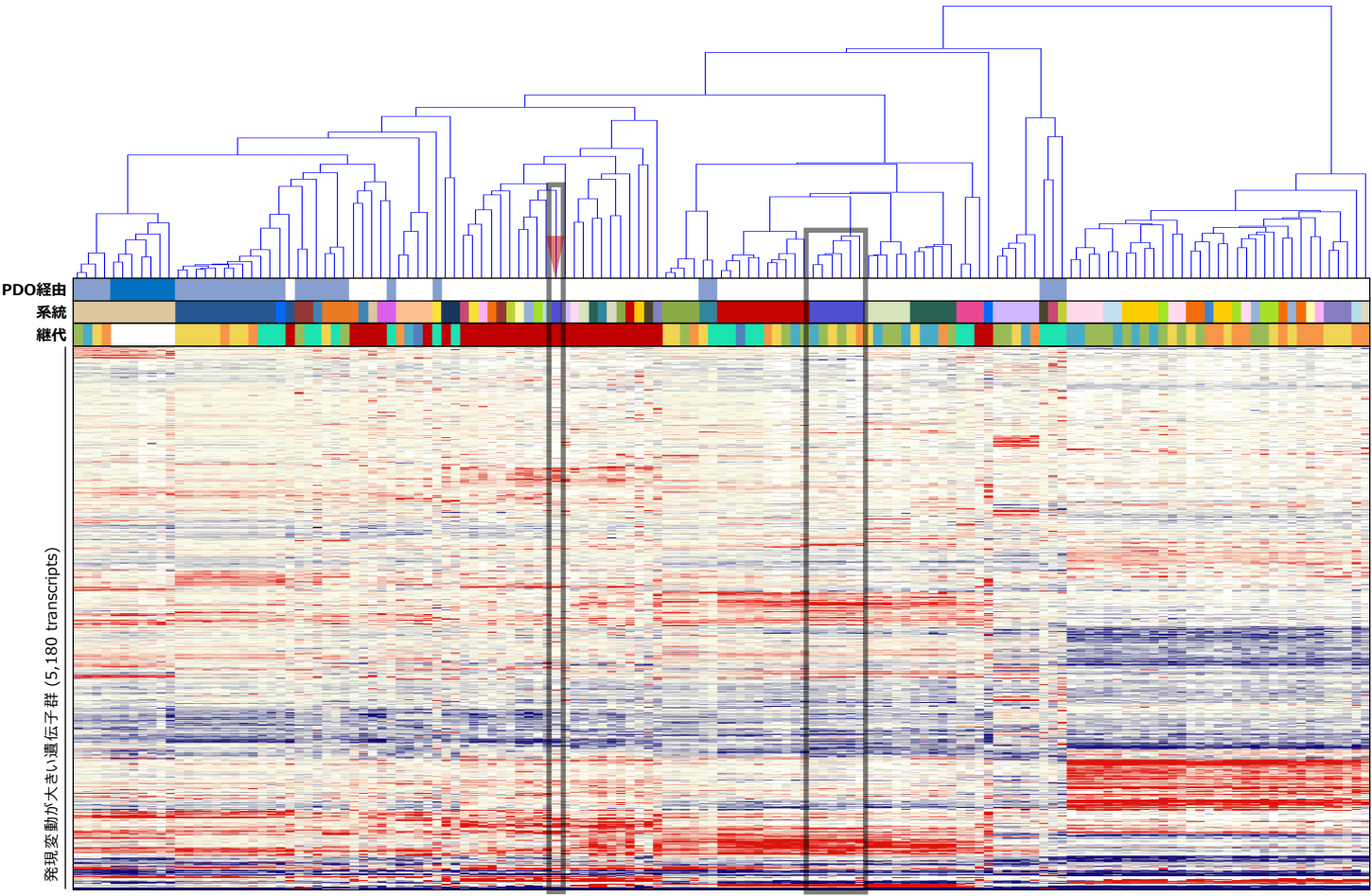
網羅的遺伝子発現解析 (クラスタ分析) による評価



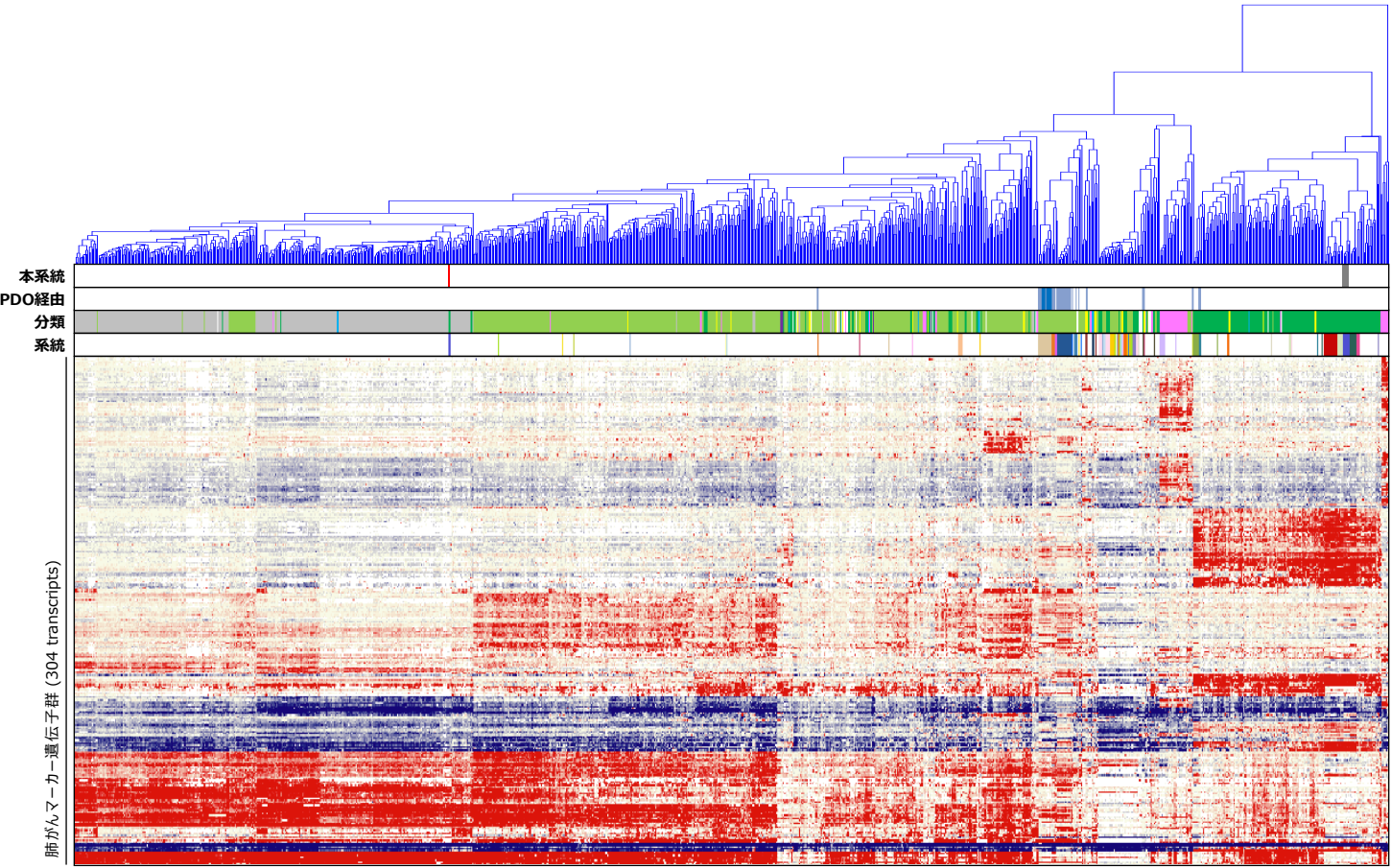
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN004 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN004 DLUN004 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |         |     |  |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|---------|-----|--|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX | Pt.     | PDX |  |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     | SLC22A2 |     |  |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     | SLC31A1 |     |  |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     | SLC34A2 |     |  |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     | SLC45A3 |     |  |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     | SLCO1B1 |     |  |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     | SLIT2   |     |  |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     | SMAD2   |     |  |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     | SMO     |     |  |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     | SOC51   |     |  |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     | SOS1    |     |  |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     | SOX9    |     |  |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     | SOX10   |     |  |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     | SOX11   |     |  |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     | SPRED1  |     |  |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     | SPTA1   |     |  |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     | SRC     |     |  |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     | STAG2   |     |  |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     | STAT1   |     |  |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     | STAT3   |     |  |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     | STAT4   |     |  |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     | STK36   |     |  |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     | SUFU    |     |  |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     | SYK     |     |  |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     | TAF1    |     |  |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     | TAL1    |     |  |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     | TBX22   |     |  |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     | TCF3    |     |  |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     | TCF7L1  |     |  |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     | TCF7L2  |     |  |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     | TCL1A   |     |  |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     | TENT5C  |     |  |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     | TERT    |     |  |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     | TET1    |     |  |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     | TFRC    |     |  |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     | TGFB2   |     |  |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     | TGM7    |     |  |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     | THBS1   |     |  |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     | TIMP3   |     |  |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     | TLX1    |     |  |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     | TMPRSS2 |     |  |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     | TNFAIP3 |     |  |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     | TNKG    |     |  |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     | TOP1    |     |  |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     | TOP2A   |     |  |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     | TP63    |     |  |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     | TP73    |     |  |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     | TPMT    |     |  |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     | TRAF7   |     |  |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     | TRIM24  |     |  |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     | TSC2    |     |  |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     | TSHR    |     |  |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     | TYK2    |     |  |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSPQ2   |     |     | TYMS    |     |  |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSPQ3   |     |     | UBR5    |     |  |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     | UGT1A1  |     |  |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     | VEGFA   |     |  |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     | VKORC1  |     |  |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     | WAS     |     |  |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     | WISP3   |     |  |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     | XPC     |     |  |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     | XRCC2   |     |  |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     | YES1    |     |  |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     | ZBTB2   |     |  |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     | ZNF217  |     |  |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     | ZNF384  |     |  |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     | ZNF521  |     |  |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     | ZNF703  |     |  |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |         |     |  |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |         |     |  |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |         |     |  |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |         |     |  |

【SNV検出】

- ◆ Missense

◆ Inframe Indel

▼ Stop Loss
- ◆ Frameshift Indel

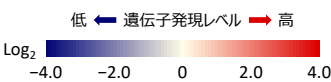
♥ Nonsense

● Other
- ★ Fusion

✚ ITD

✱ Multiple

【遺伝子発現プロファイル】





臨床情報

F\_PDX\_000056

|                |                            |         |         |            |       |
|----------------|----------------------------|---------|---------|------------|-------|
| 臨床情報シート区分      |                            | 肺腫瘍     |         |            |       |
| 性 別            | 男                          | 年 齢     | 71 歳    | 採 取 部 位    | 肺     |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span> |         |         |            |       |
|                | 病理診断名                      |         | 診断コード   |            |       |
|                | 扁平上皮がん                     |         | L2.2    |            |       |
| 病 期 分 類        | 原発腫瘍 (T)                   | T2      | (T2b )  |            |       |
|                | 所属リンパ節 (N)                 | N2      |         |            |       |
|                | 遠隔転移 (M)                   | M0      |         |            |       |
|                | ステージ                       | III     | (IIIA ) |            |       |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                | ly1     |         | 肺動脈断端 (pa) | 陽性(+) |
|                | 血管浸潤 (v)                   | v1      |         |            |       |
|                | 胸膜浸潤 (pl)                  | pl0     |         |            |       |
|                | 胸水/胸腔洗浄液                   | CLASS I |         |            |       |
|                | 気管支断端 (br)                 | br0     |         |            |       |
| 免疫組織学的<br>検 査  |                            |         |         |            |       |
| 既 往 歴          | 十二指腸潰瘍, AMI                |         |         |            |       |
| 放射線療法歴         |                            |         |         |            |       |
| 薬剤治療歴          |                            |         |         |            |       |
| 喫 煙 歴          | あり (過去)                    |         |         |            |       |
| 飲 酒 歴          | あり (習慣性)                   |         |         |            |       |
| 特 記 事 項        |                            |         |         |            |       |

GEP SNV CNV HLA

基本属性

F-PDX®

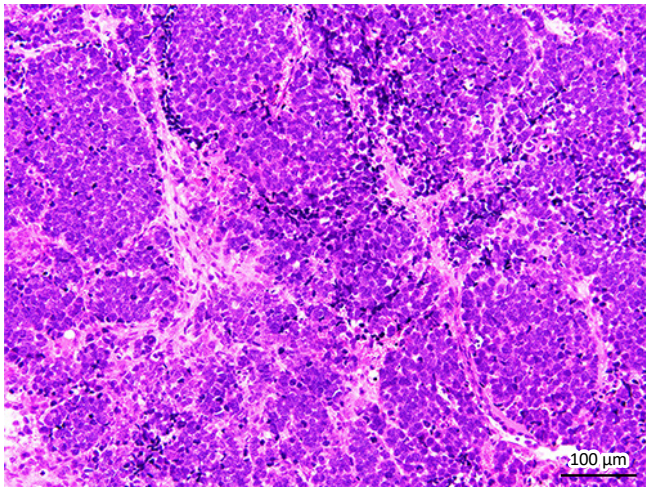
|        |             |      |    |
|--------|-------------|------|----|
| 移植動物系統 | NOG         | 移植部位 | 皮下 |
| 生着日数   | 68 日        |      |    |
| 増殖速度   | 6.5 mm³/day |      |    |
| 病理組織所見 | 小細胞がん       |      |    |
| 培養細胞化  |             |      |    |

移植サンプル

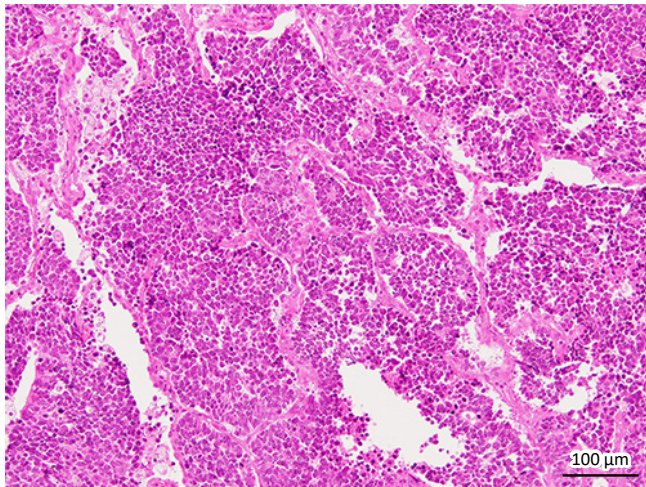
|         |                  |    |      |
|---------|------------------|----|------|
| 採取部位    | 原発巣 (肺)          |    |      |
| 性別      | 男性               | 年齢 | 72 歳 |
| 入手先     | 日本               |    |      |
| 病理組織所見  | 混合型小細胞がん; 腺房型腺がん |    |      |
| F-PDO系統 |                  |    |      |

病理組織像

F-PDX®

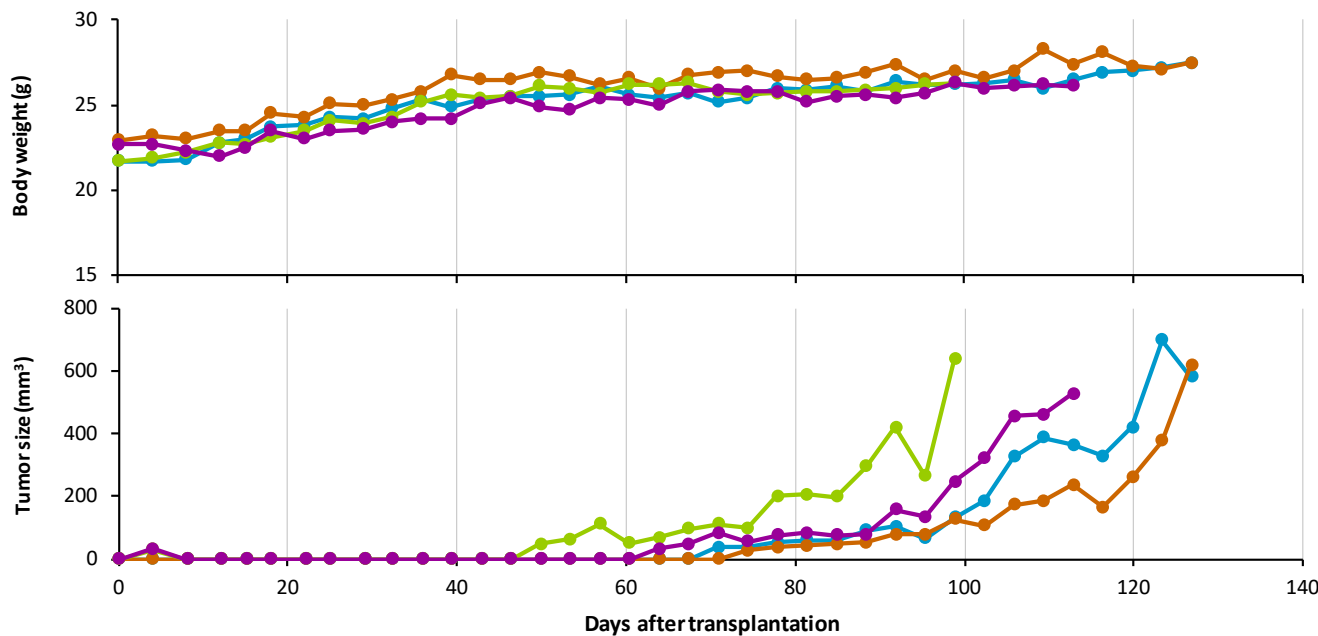


元腫瘍



移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



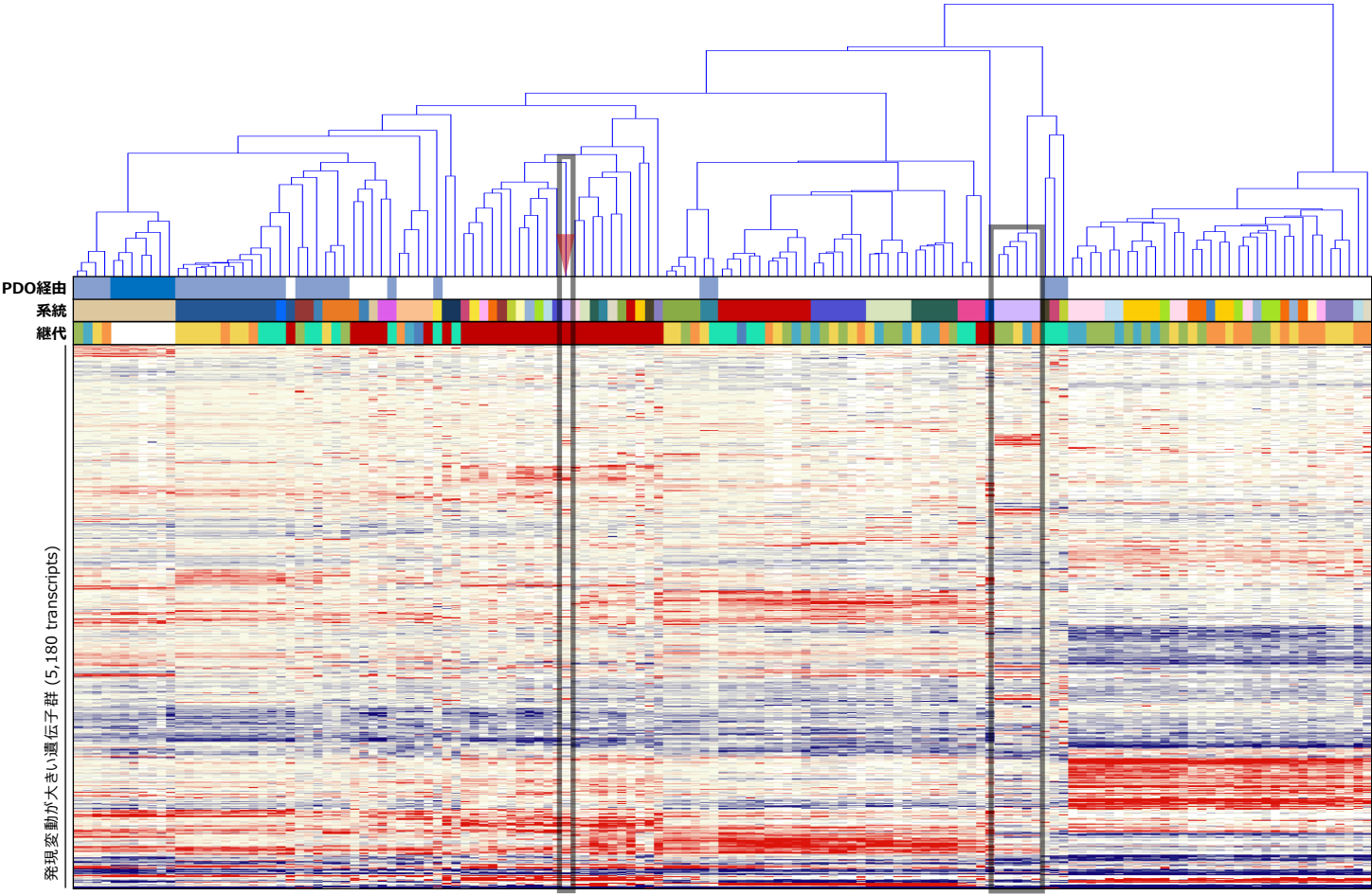
網羅的遺伝子発現解析 (クラスタ分析) による評価



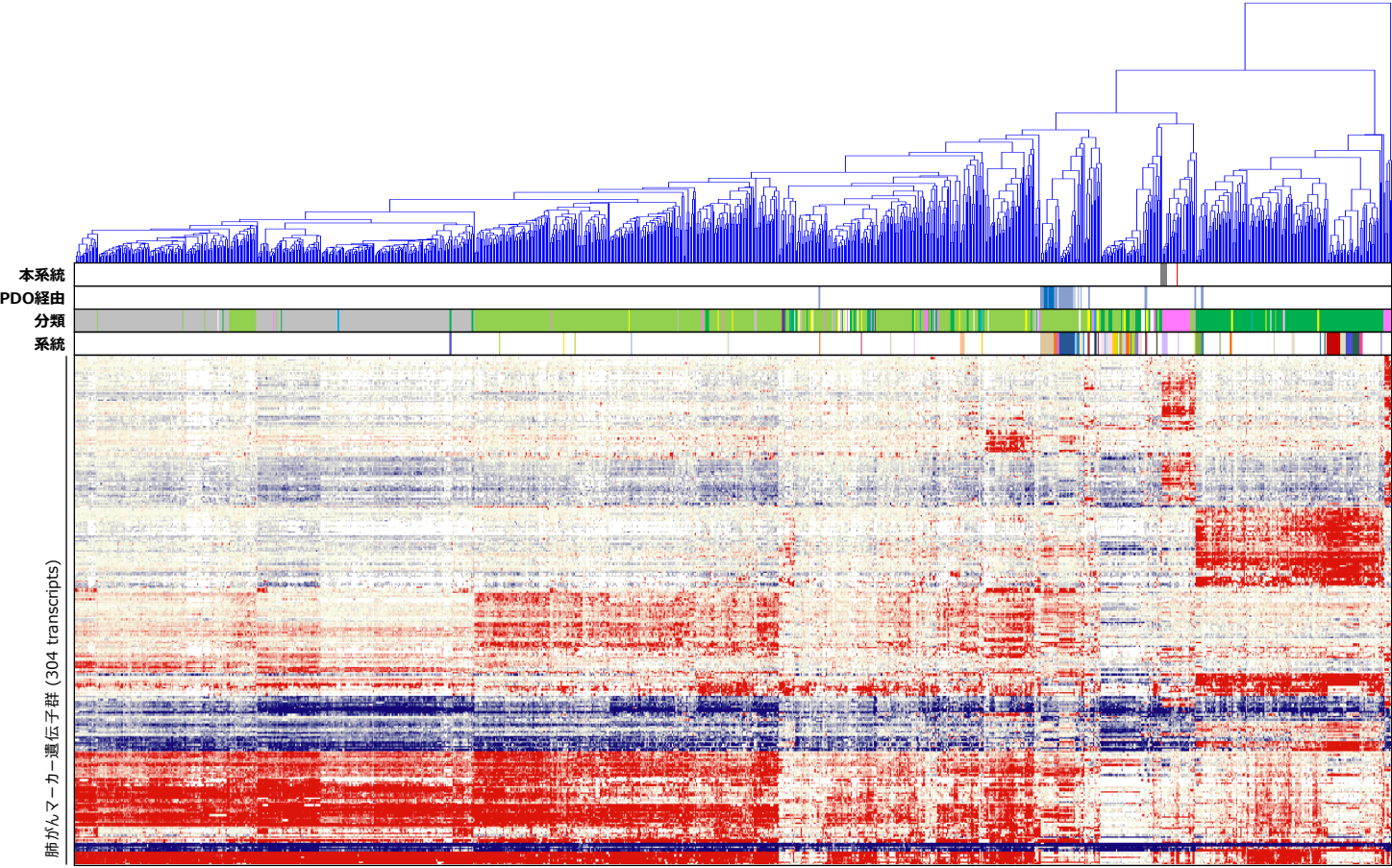
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN005 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN005 DLUN005 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CNE1     |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKKB     |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CND2         |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】

◆ Missense

◆ Inframe Indel

▼ Stop Loss

◆ Frameshift Indel

♥ Nonsense

● Other

★ Fusion

✚ ITD

✳ Multiple

【遺伝子発現プロファイル】

低 ← 遺伝子発現レベル → 高

Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000057

|                |               |         |          |         |   |
|----------------|---------------|---------|----------|---------|---|
| 臨床情報シート区分      |               | 肺腫瘍     |          |         |   |
| 性 別            | 男             | 年 齢     | 72 歳     | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 L |         |          |         |   |
|                | 病理診断名         |         | 診断コード    |         |   |
|                | 混合型小細胞がん      |         | L2.5.1.1 |         |   |
|                | 腺房型腺がん        |         | L2.1.02  |         |   |
| 病 期 分 類        | 原発腫瘍 (T)      | T2      | (T2a )   |         |   |
|                | 所属リンパ節 (N)    | N1      |          |         |   |
|                | 遠隔転移 (M)      | M0      |          |         |   |
|                | ステージ          | II      | (IIB )   |         |   |
|                | 分化度 (G)       | G4      |          |         |   |
|                | (第8版)         |         |          |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)   | ly1     |          |         |   |
|                | 血管浸潤 (v)      | v1      |          |         |   |
|                | 胸膜浸潤 (pl)     | pl1     |          |         |   |
|                | 胸水/胸腔洗浄液      | CLASS I |          |         |   |
|                | 気管支断端 (br)    | 陰性(-)   |          |         |   |
| 免疫組織学的<br>検 査  | CD56          | 陽性(+)   | 裸核状異型細胞  |         |   |
|                | ChromograninA | 陰性(-)   | 裸核状異型細胞  |         |   |
|                | Synaptophysin | 陰性(-)   | 裸核状異型細胞  |         |   |
|                | MIB-1         | 70-80 % | 裸核状異型細胞  |         |   |
|                | CD56          | 陰性(-)   | 腺房様腺管細胞  |         |   |
|                | ChromograninA | 陰性(-)   | 腺房様腺管細胞  |         |   |
| Synaptophysin  | 陰性(-)         | 腺房様腺管細胞 |          |         |   |
| 既 往 歴          | 胃がん , 下行結腸がん  |         |          |         |   |
| 放射線療法歴         |               |         |          |         |   |
| 薬剤治療歴          |               |         |          |         |   |
| 喫 煙 歴          | あり (過去)       |         |          |         |   |
| 飲 酒 歴          | あり (習慣性)      |         |          |         |   |
| 特 記 事 項        |               |         |          |         |   |

GEP SNV CNV HLA

基本属性

F-PDX®

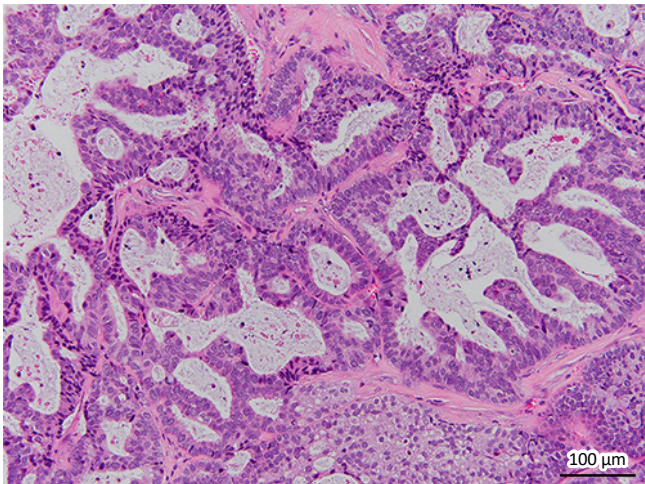
|        |             |      |    |
|--------|-------------|------|----|
| 移植動物系統 | NOG         | 移植部位 | 皮下 |
| 生着日数   | 54 日        |      |    |
| 増殖速度   | 3.1 mm³/day |      |    |
| 病理組織所見 | 乳頭型腺がん      |      |    |
| 培養細胞化  |             |      |    |

移植サンプル

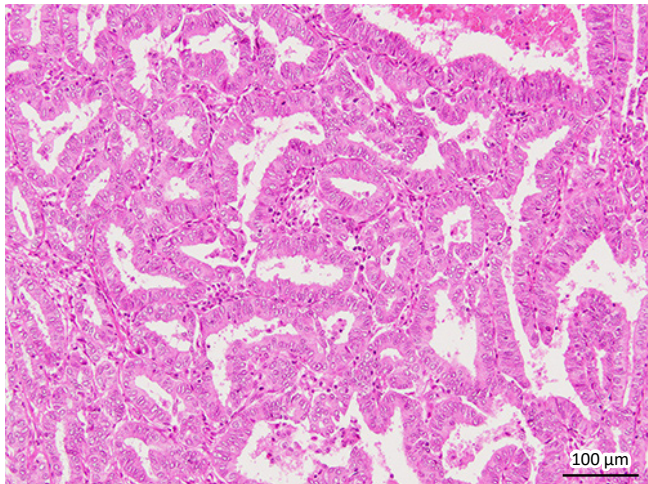
|         |         |    |      |
|---------|---------|----|------|
| 採取部位    | 原発巣 (肺) |    |      |
| 性別      | 女性      | 年齢 | 68 歳 |
| 入手先     | 日本      |    |      |
| 病理組織所見  | 乳頭型腺がん  |    |      |
| F-PDO系統 |         |    |      |

病理組織像

F-PDX®

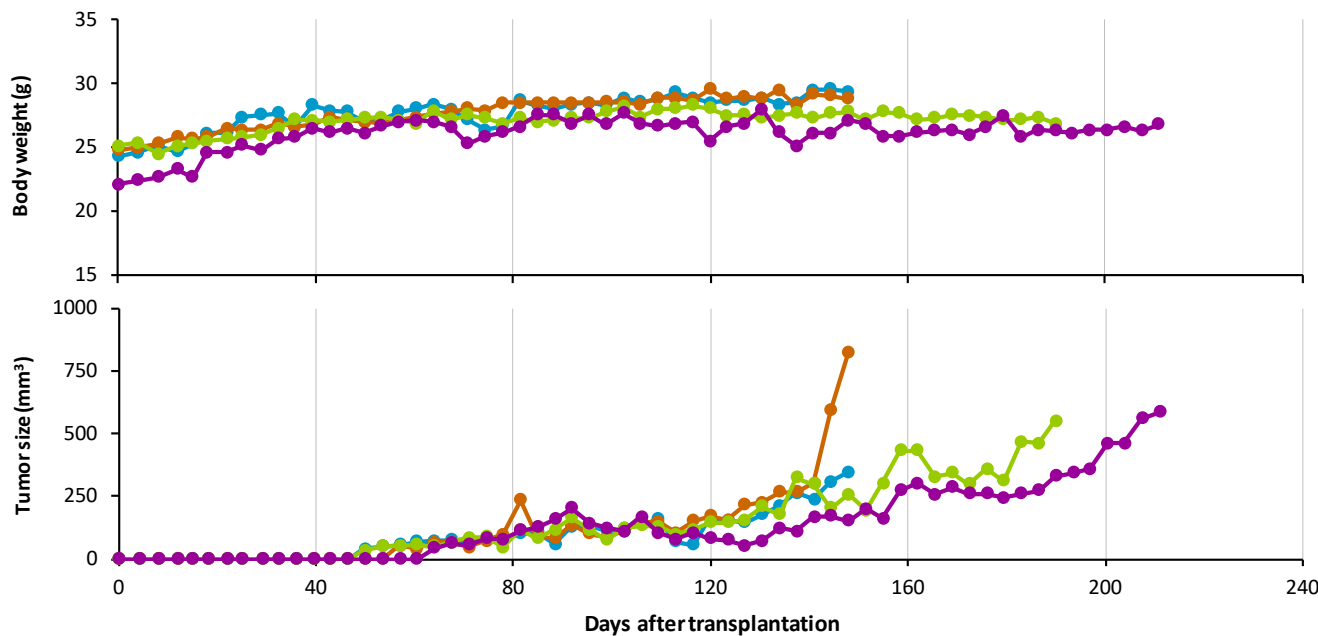


元腫瘍



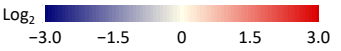
移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





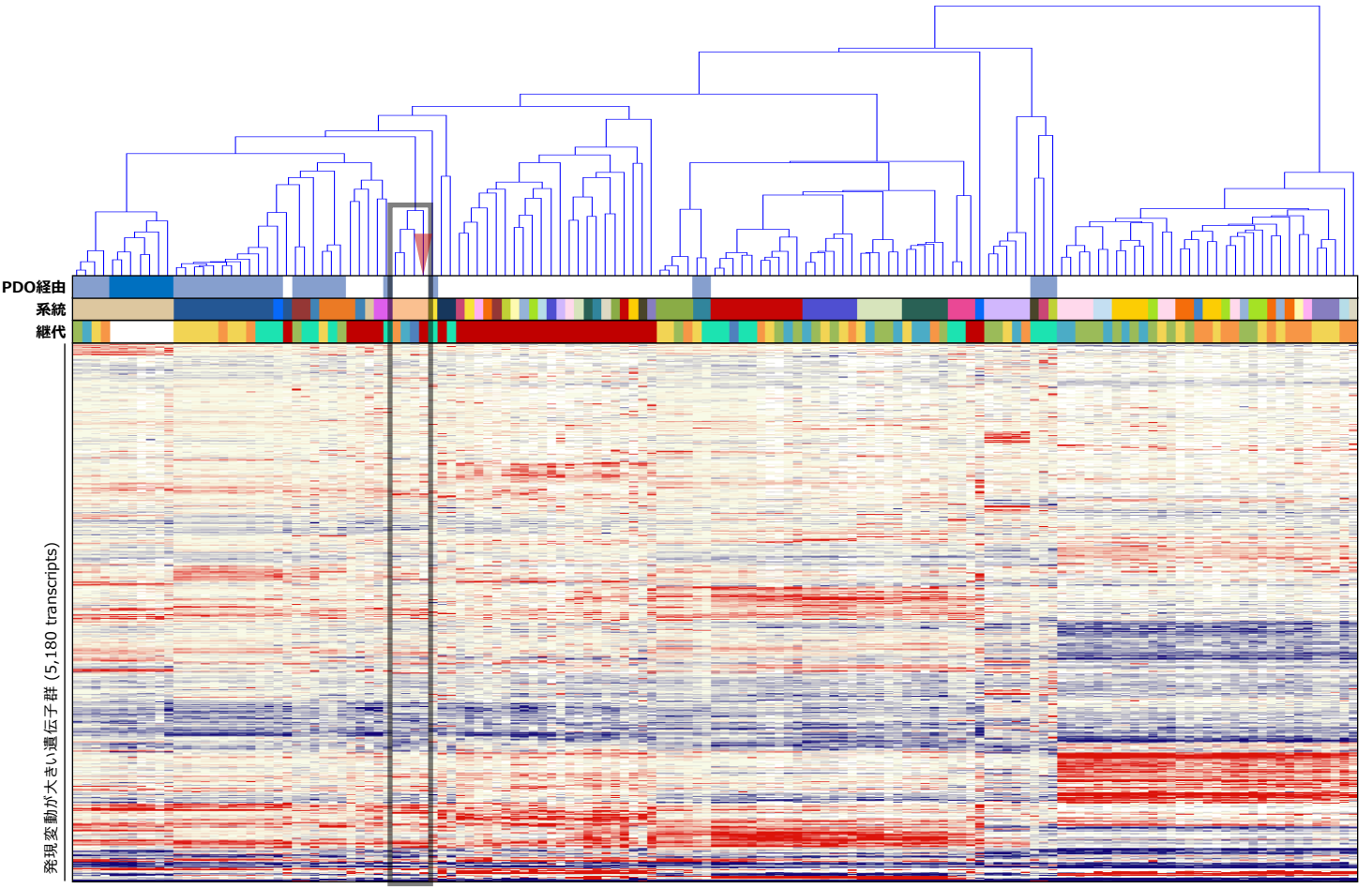
網羅的遺伝子発現解析 (クラスタ分析) による評価



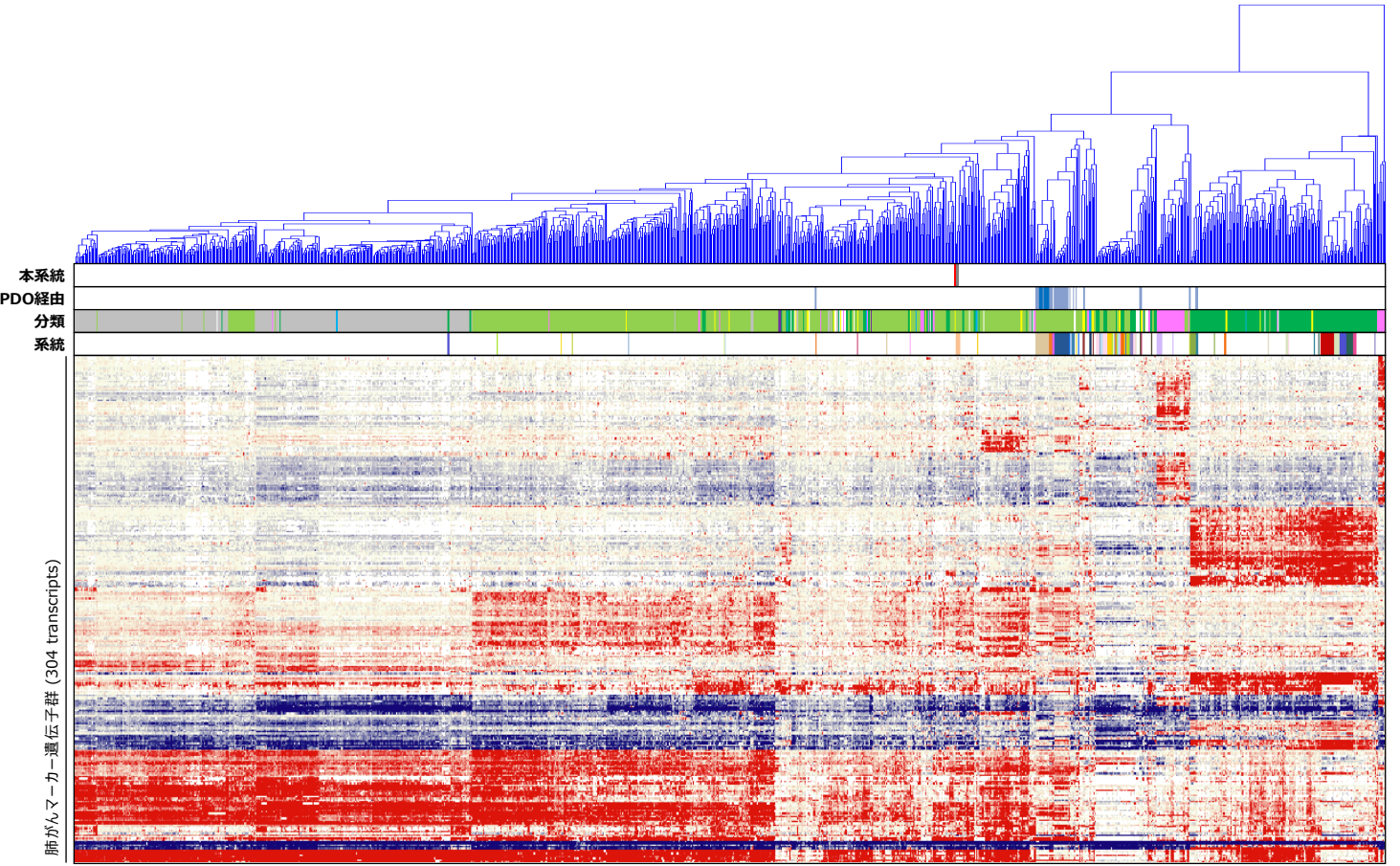
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN006 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN006 DLUN006 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CNE1     |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     | *   |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBBF         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CND2         |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
◆ Inframe Indel  
▼ Stop Loss  
◆ Frameshift Indel  
♥ Nonsense  
● Other  
★ Fusion  
+ ITD  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000058

|                |                            |         |         |         |   |
|----------------|----------------------------|---------|---------|---------|---|
| 臨床情報シート区分      |                            | 肺腫瘍     |         |         |   |
| 性 別            | 女                          | 年 齢     | 68 歳    | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span> |         |         |         |   |
|                | 病理診断名                      |         | 診断コード   |         |   |
|                | 乳頭型腺がん                     |         | L2.1.03 |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                   | T2      | (T2b )  |         |   |
|                | 所属リンパ節 (N)                 | N2      |         |         |   |
|                | 遠隔転移 (M)                   | M0      |         |         |   |
|                | ステージ                       | III     | (IIIA ) |         |   |
|                | 分化度 (G)                    | G2      |         |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                | 陽性(+)   |         |         |   |
|                | 血管浸潤 (v)                   | 陽性(+)   |         |         |   |
|                | 胸膜浸潤 (pl)                  | pI0     |         |         |   |
|                | 胸水/胸腔洗浄液                   | CLASS I |         |         |   |
|                | 気管支断端 (br)                 | 陰性(-)   |         |         |   |
| 免疫組織学的<br>検 査  |                            |         |         |         |   |
| 既 往 歴          | 大動脈弁疾患                     |         |         |         |   |
| 放射線療法歴         |                            |         |         |         |   |
| 薬剤治療歴          | ゲフィチニブ                     |         |         |         |   |
| 喫 煙 歴          | なし                         |         |         |         |   |
| 飲 酒 歴          | なし                         |         |         |         |   |
| 特 記 事 項        |                            |         |         |         |   |



GEP SNV CNV HLA

基本属性

F-PDX®

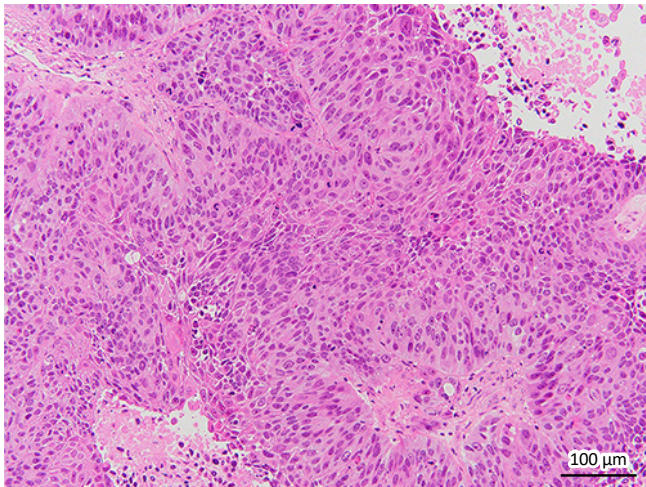
|        |                           |      |    |
|--------|---------------------------|------|----|
| 移植動物系統 | NOG                       | 移植部位 | 皮下 |
| 生着日数   | 69日                       |      |    |
| 増殖速度   | 10.7 mm <sup>3</sup> /day |      |    |
| 病理組織所見 | 扁平上皮がん                    |      |    |
| 培養細胞化  |                           |      |    |

移植サンプル

|         |        |    |     |
|---------|--------|----|-----|
| 採取部位    | 原発巣(肺) |    |     |
| 性別      | 男性     | 年齢 | 80歳 |
| 入手先     | 日本     |    |     |
| 病理組織所見  | 扁平上皮がん |    |     |
| F-PDO系統 |        |    |     |

病理組織像

F-PDX®

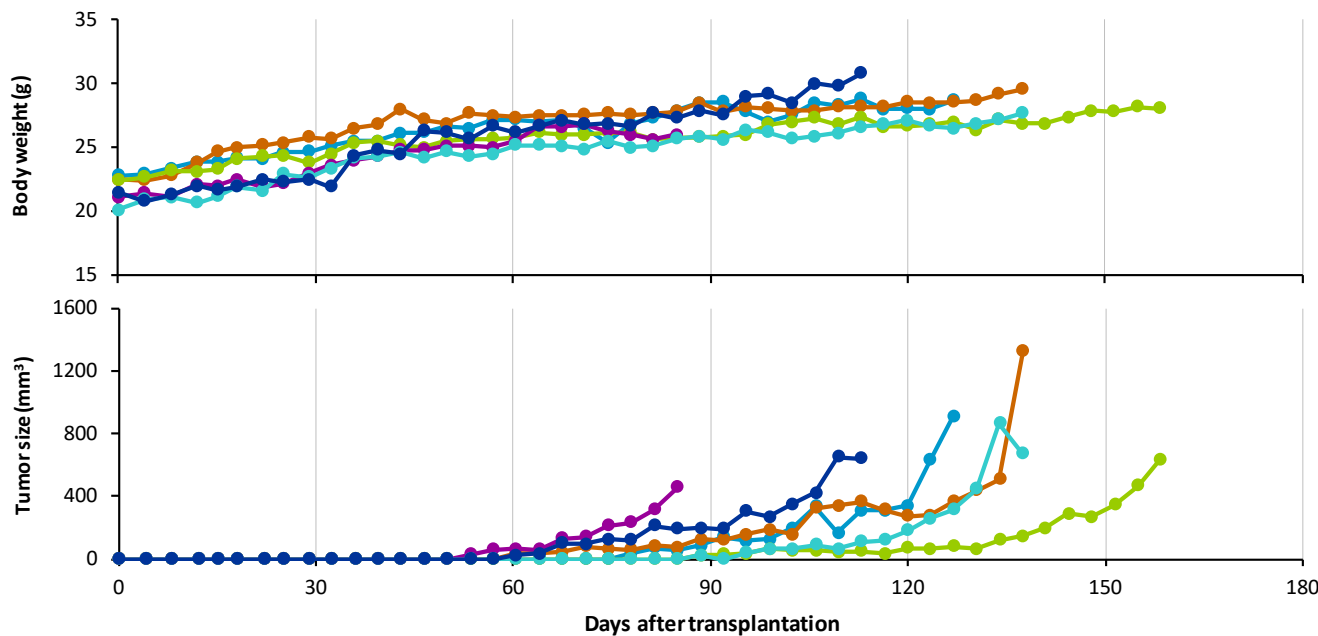


元腫瘍



移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



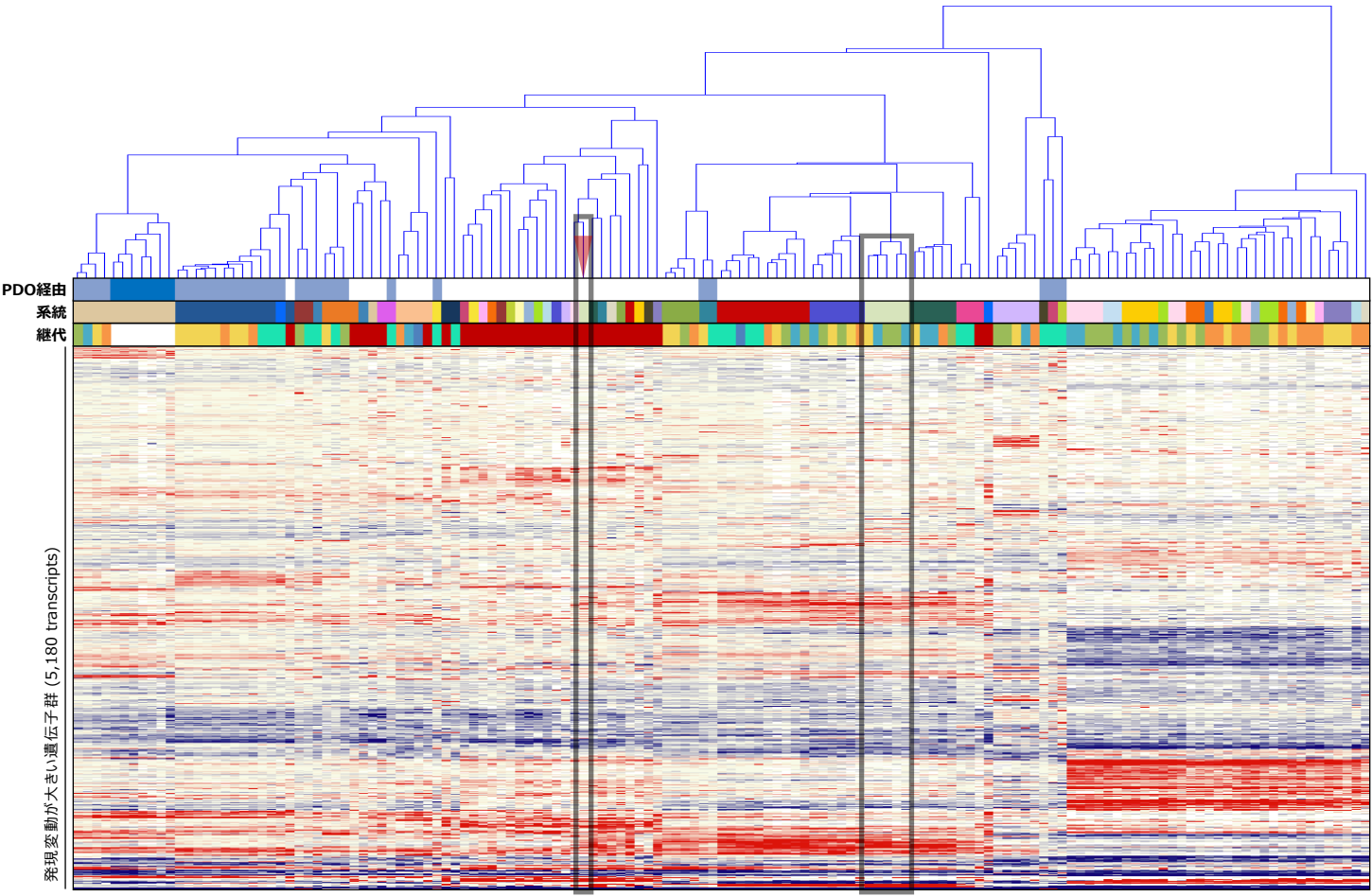
網羅的遺伝子発現解析 (クラスタ分析) による評価



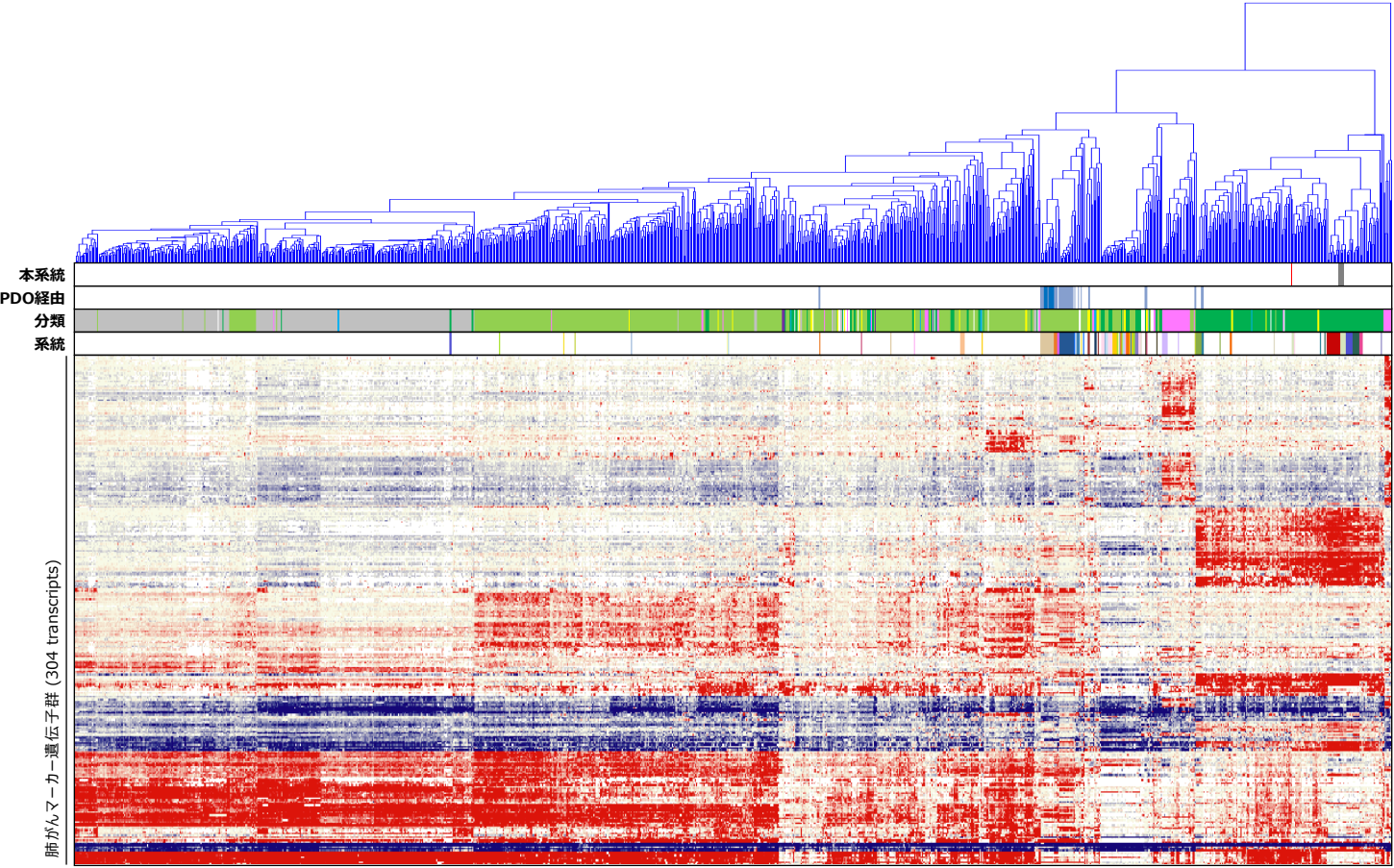
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN007 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN007 DLUN007 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKKB     |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBBF         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXR8    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
◆ Inframe Indel  
▼ Stop Loss  
◆ Frameshift Indel  
♥ Nonsense  
● Other  
★ Fusion  
+ ITD  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0



臨床情報

F\_PDX\_000059

|                |                                   |     |        |         |   |
|----------------|-----------------------------------|-----|--------|---------|---|
| 臨床情報シート区分      |                                   | 肺腫瘍 |        |         |   |
| 性 別            | 男                                 | 年 齢 | 80 歳   | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span>        |     |        |         |   |
|                | 病理診断名                             |     | 診断コード  |         |   |
|                | 扁平上皮がん                            |     | L2.2   |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                          | T1  | (T1a ) |         |   |
|                | 所属リンパ節 (N)                        | N0  |        |         |   |
|                | 遠隔転移 (M)                          | M0  |        |         |   |
|                | ステージ                              | I   | (IA )  |         |   |
|                | 分化度 (G)                           | G2  |        |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                       | ly0 |        |         |   |
|                | 血管浸潤 (v)                          | v0  |        |         |   |
|                | 胸膜浸潤 (pl)                         | pl0 |        |         |   |
| 免疫組織学的<br>検 査  |                                   |     |        |         |   |
| 既 往 歴          | 胃がん, イレウス, COPD, 脳出血, 大腸ポリープ, 狭心症 |     |        |         |   |
| 放射線療法歴         |                                   |     |        |         |   |
| 薬剤治療歴          |                                   |     |        |         |   |
| 喫 煙 歴          | あり (現役)                           |     |        |         |   |
| 飲 酒 歴          | あり (習慣性)                          |     |        |         |   |
| 特 記 事 項        |                                   |     |        |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 22 日

増殖速度 11.1 mm<sup>3</sup>/day

病理組織所見 扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺)

性別 男性

年齢 60 歳

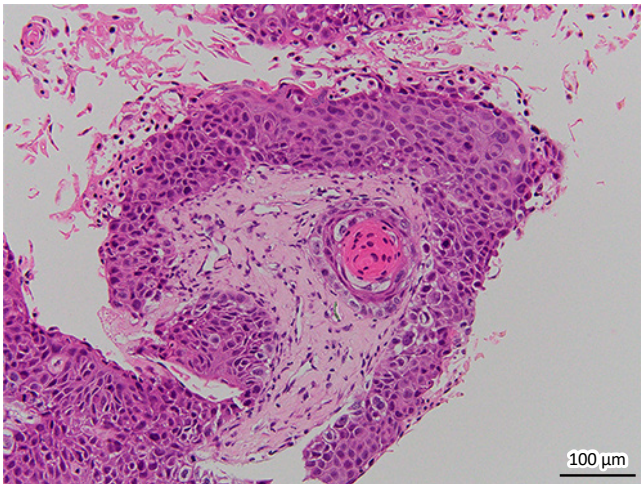
入手先 日本

病理組織所見 扁平上皮がん

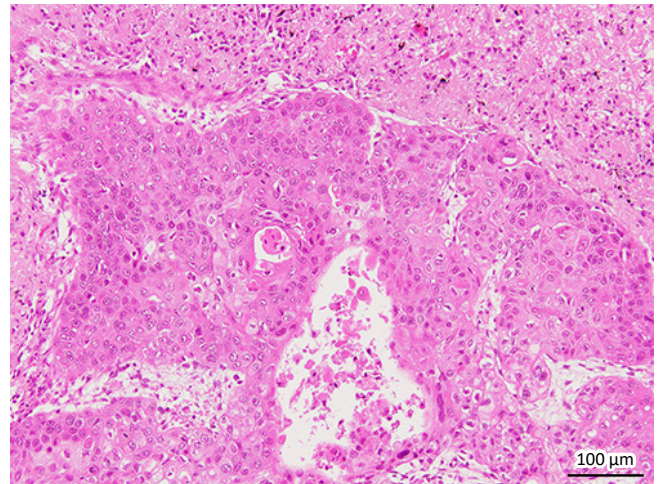
F-PDO系統

## 病理組織像

## F-PDX®

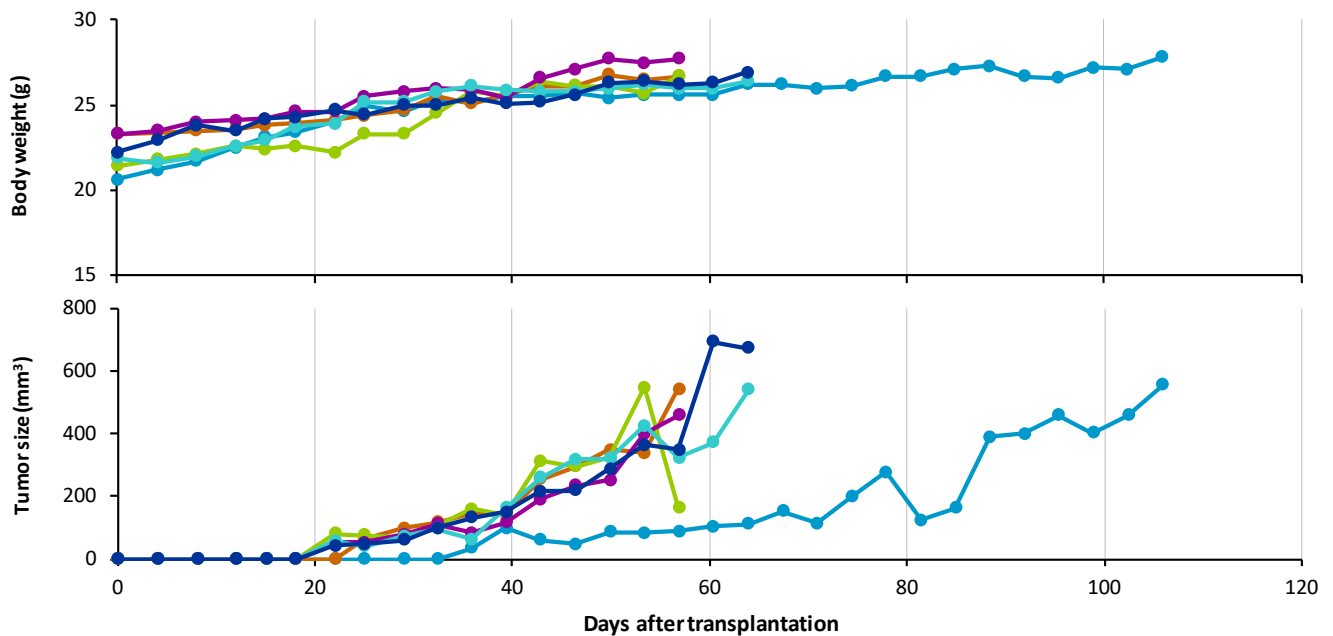


## 元腫瘍

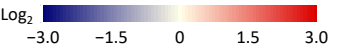


## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



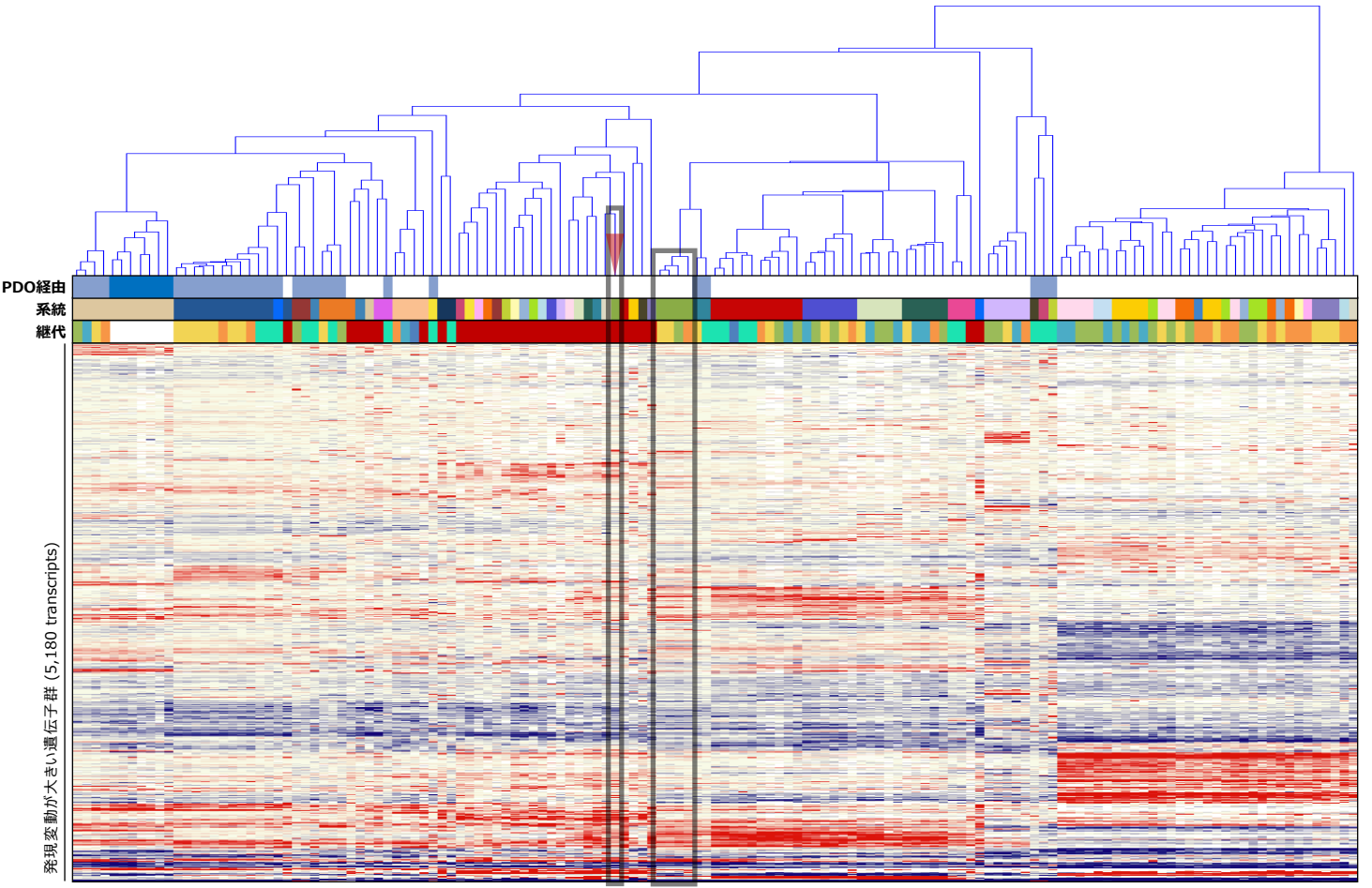
網羅的遺伝子発現解析 (クラスタ分析) による評価



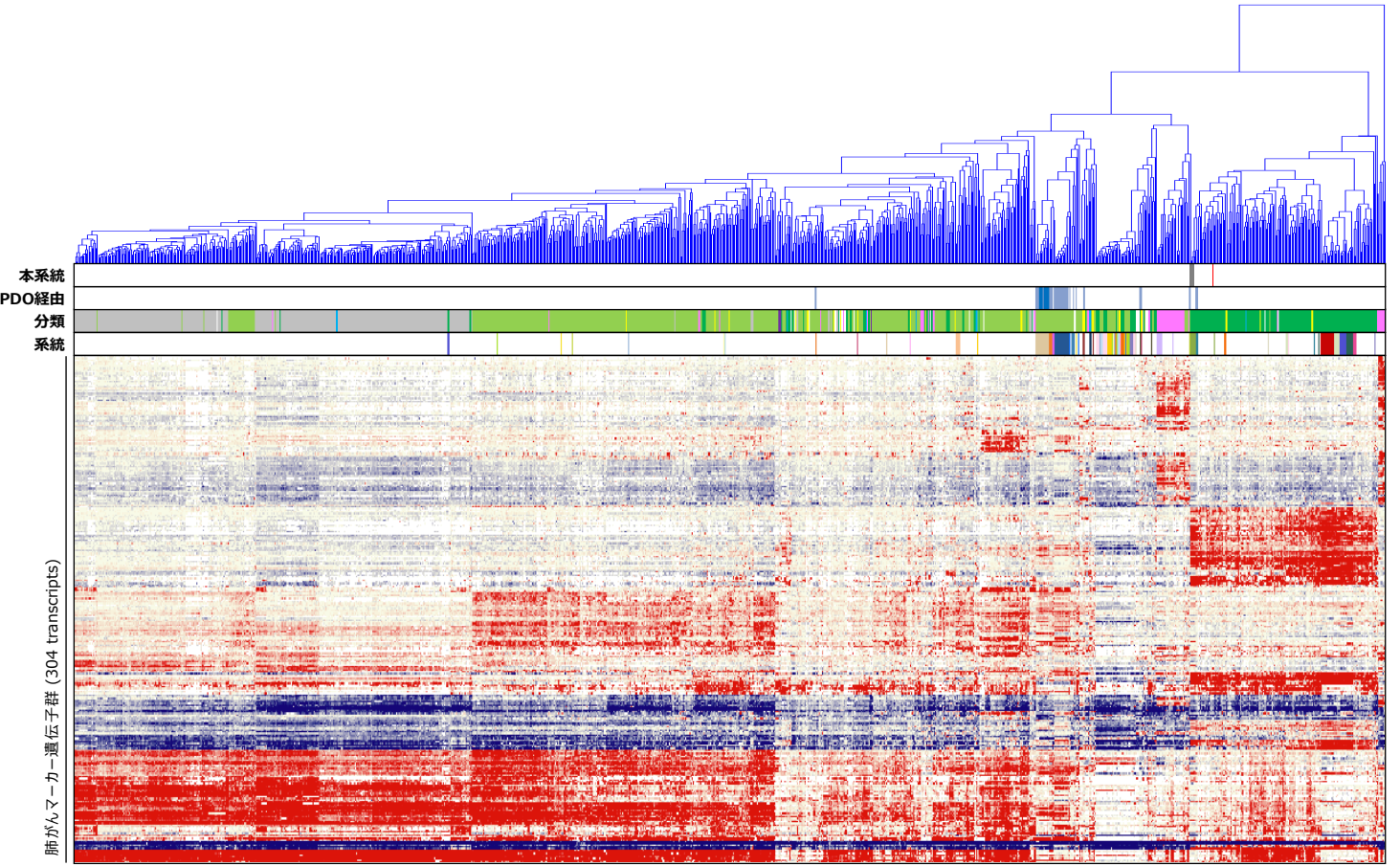
【系統】 元の腫瘍が同じサンプルを同一色で表示      【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植      ▼ DLUN008 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO      【本系統】 DLUN008 DLUN008 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXR8    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
◆ Inframe Indel  
▼ Stop Loss  
◆ Frameshift Indel  
♥ Nonsense  
● Other  
★ Fusion  
+ ITD  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000060

|                |                            |         |        |            |       |
|----------------|----------------------------|---------|--------|------------|-------|
| 臨床情報シート区分      |                            | 肺腫瘍     |        |            |       |
| 性 別            | 男                          | 年 齢     | 60 歳   | 採 取 部 位    | 肺     |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span> |         |        |            |       |
|                | 病理診断名                      |         | 診断コード  |            |       |
|                | 扁平上皮がん                     |         | L2.2   |            |       |
| 病 期 分 類        | 原発腫瘍 (T)                   | T2      | (T2a ) |            |       |
|                | 所属リンパ節 (N)                 | N0      |        |            |       |
|                | 遠隔転移 (M)                   | M0      |        |            |       |
|                | ステージ                       | I       | (IB )  |            |       |
|                | 分化度 (G)                    | G2      |        |            |       |
| (第7版)          |                            |         |        |            |       |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                | ly0     |        | 肺動脈断端 (pa) | 陰性(-) |
|                | 血管浸潤 (v)                   | v0      |        | 肺静脈断端 (pv) | 陰性(-) |
|                | 胸膜浸潤 (pl)                  | pl0     |        |            |       |
|                | 胸水/胸腔洗浄液                   | CLASS I | 異型細胞なし |            |       |
|                | 気管支断端 (br)                 | 陰性(-)   |        |            |       |
| 免疫組織学的<br>検 査  |                            |         |        |            |       |
| 既 往 歴          | 胃潰瘍, 胆石症, 高血圧              |         |        |            |       |
| 放射線療法歴         |                            |         |        |            |       |
| 薬剤治療歴          |                            |         |        |            |       |
| 喫 煙 歴          | あり (現役)                    |         |        |            |       |
| 飲 酒 歴          | あり (習慣性)                   |         |        |            |       |
| 特 記 事 項        |                            |         |        |            |       |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 36 日

増殖速度 3.6 mm<sup>3</sup>/day

病理組織所見 腺がん

培養細胞化

## 移植サンプル

採取部位 転移巣 (胸水), 再発, F-PDO経由

性別 男性 年齢 65 歳

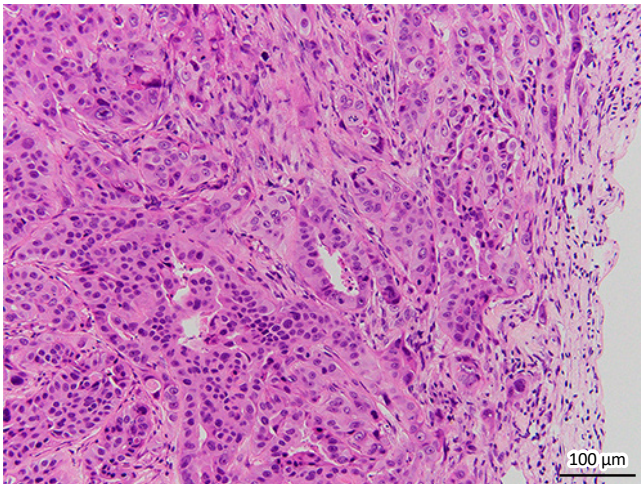
入手先 日本

病理組織所見 肺腫瘍の転移; 置換型腺がん; 乳頭型腺がん

F-PDO系統 RLUN007-2 (F\_PDO\_000151)

## 病理組織像

## F-PDX®

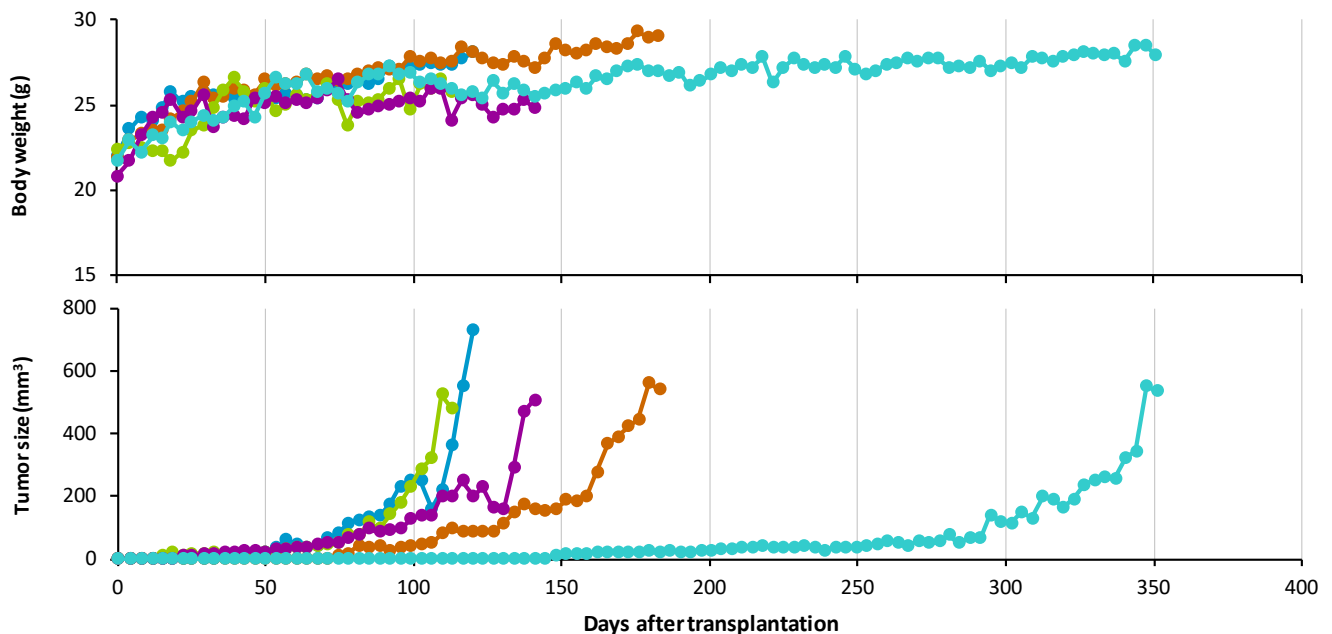


## 元腫瘍

No image available

## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





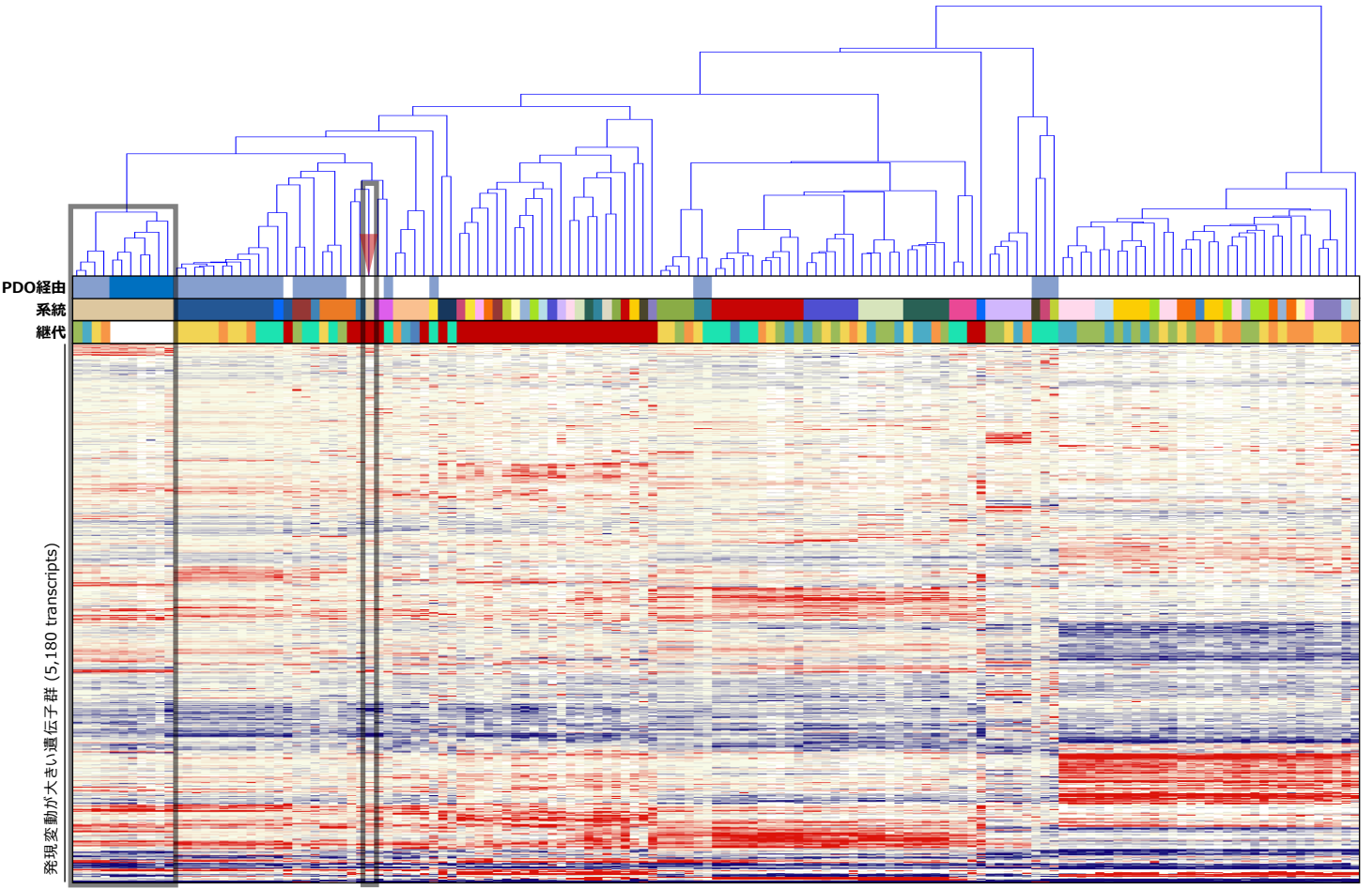
網羅的遺伝子発現解析 (クラスタ分析) による評価



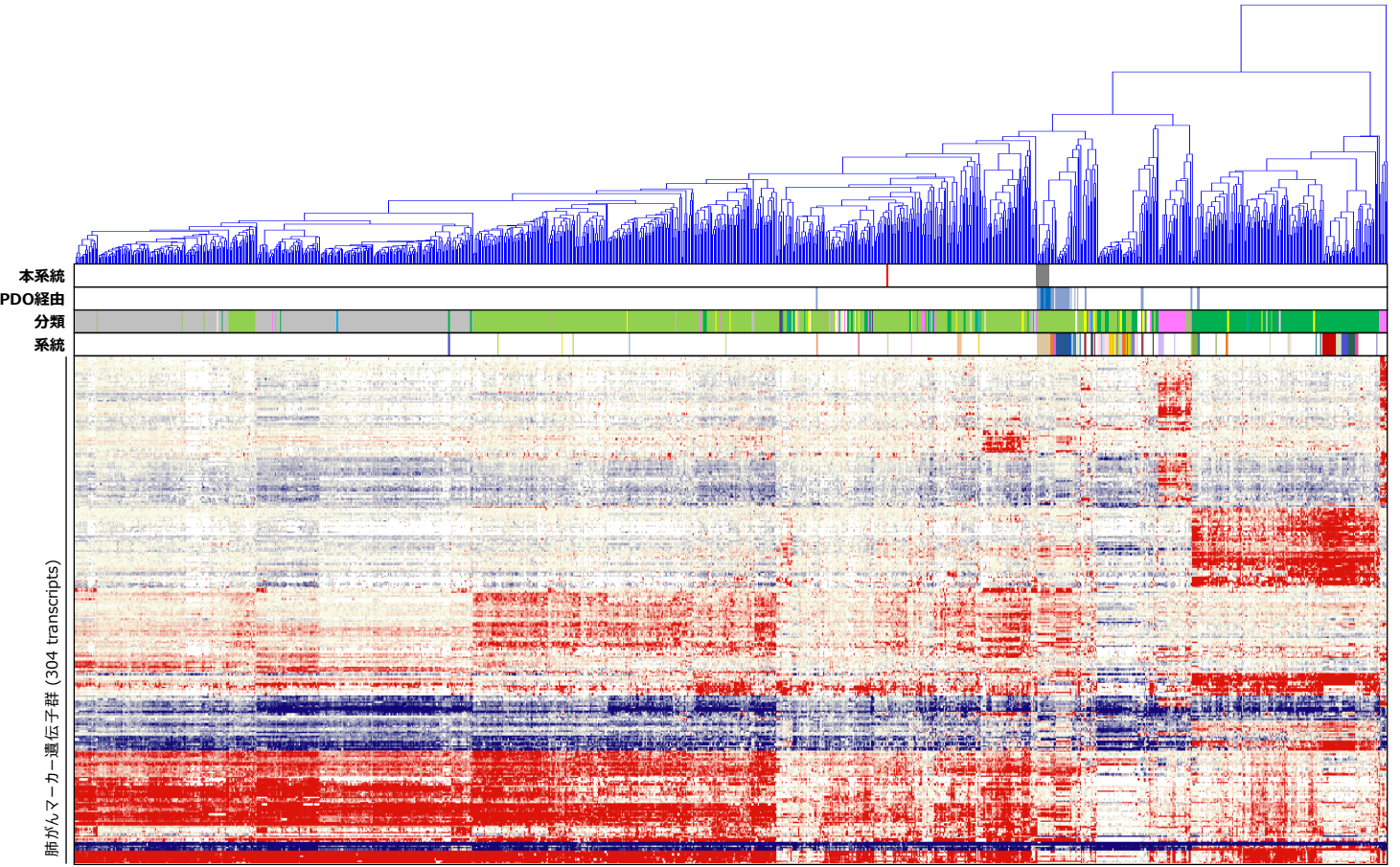
【系統】 元の腫瘍が同じサンプルを同一色で表示      【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植      ▼ DLUN009 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO      【本系統】 DLUN009 DLUN009 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

## がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO1   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO3   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】

◆ Missense

◆ Inframe Indel

▼ Stop Loss

✦ Frameshift Indel

♥ Nonsense

● Other

★ Fusion

+ ITD

✳ Multiple

【遺伝子発現プロファイル】

低 ← 遺伝子発現レベル → 高

Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000061

2024/07/31

|                |                                                                                           |     |         |         |    |
|----------------|-------------------------------------------------------------------------------------------|-----|---------|---------|----|
| 臨床情報シート区分      |                                                                                           | 肺腫瘍 |         |         |    |
| 性 別            | 男                                                                                         | 年 齢 | 65 歳    | 採 取 部 位 | 胸水 |
| 診 断 名          | 臓器分類: 肺、気管支 L                                                                             |     |         |         |    |
|                | 病理診断名                                                                                     |     | 診断コード   |         |    |
|                | 肺腫瘍の転移                                                                                    |     | L6      |         |    |
|                | 置換型腺がん                                                                                    |     | L2.1.01 |         |    |
|                | 乳頭型腺がん                                                                                    |     | L2.1.03 |         |    |
| 病 期 分 類        | 原発腫瘍 (T)                                                                                  | T2  | (T2a )  | (原発)    |    |
|                | 所属リンパ節 (N)                                                                                | N0  |         | (原発)    |    |
|                | 遠隔転移 (M)                                                                                  | M0  |         | (原発)    |    |
|                | ステージ                                                                                      | I   | (IB )   | (原発)    |    |
|                | (規約第7版)                                                                                   |     |         |         |    |
| 手 術・病 理<br>所 見 |                                                                                           |     |         |         |    |
| 免疫組織学的<br>検 査  | Alcian blue 染色 陽性(+) (再発時胸水)                                                              |     |         |         |    |
| 既 往 歴          | 急性肝炎, 肺がん, 薬剤アレルギー (オイパロミン)                                                               |     |         |         |    |
| 放射線療法歴         | あり (左肺内再発巣)                                                                               |     |         |         |    |
| 薬剤治療歴          | テガフル, ウラシル, ギメラシル, オテラシルカリウム, シスプラチン, ペメトレキセドナトリウム水和物, ベバシズマブ, ゲフィチニブ, エルロチニブ塩酸塩, カルボプラチン |     |         |         |    |
| 喫 煙 歴          | あり (現役)                                                                                   |     |         |         |    |
| 飲 酒 歴          | なし                                                                                        |     |         |         |    |
| 特 記 事 項        |                                                                                           |     |         |         |    |



GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 8日

増殖速度 9.4 mm<sup>3</sup>/day

病理組織所見 角化型扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣(肺), F-PDO経由

性別 男性 年齢 81歳

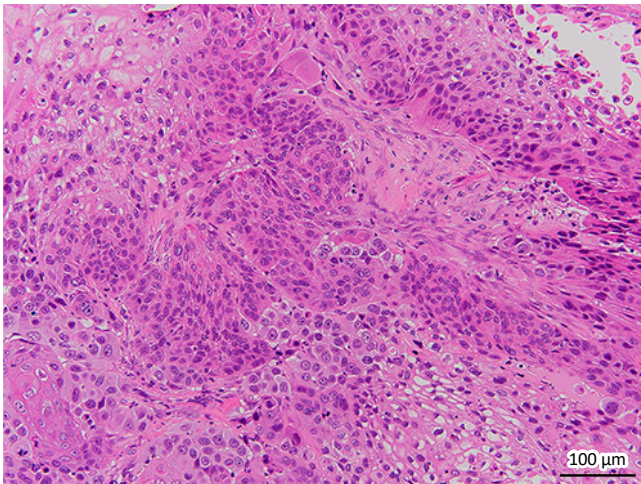
入手先 日本

病理組織所見 扁平上皮がん

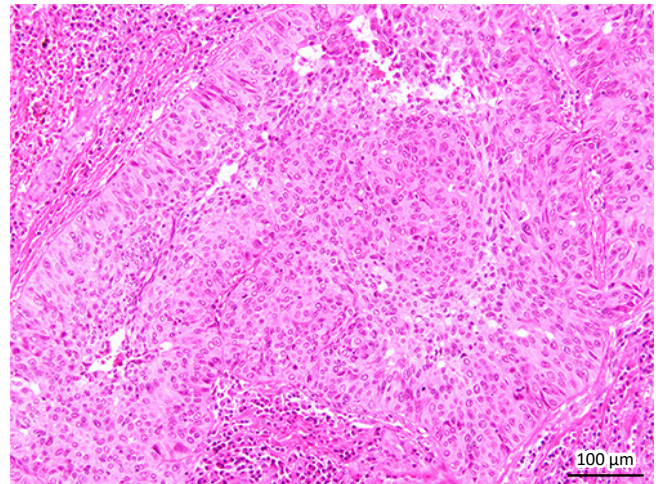
F-PDO系統 RLUN021 (F\_PDO\_000091)

## 病理組織像

## F-PDX®

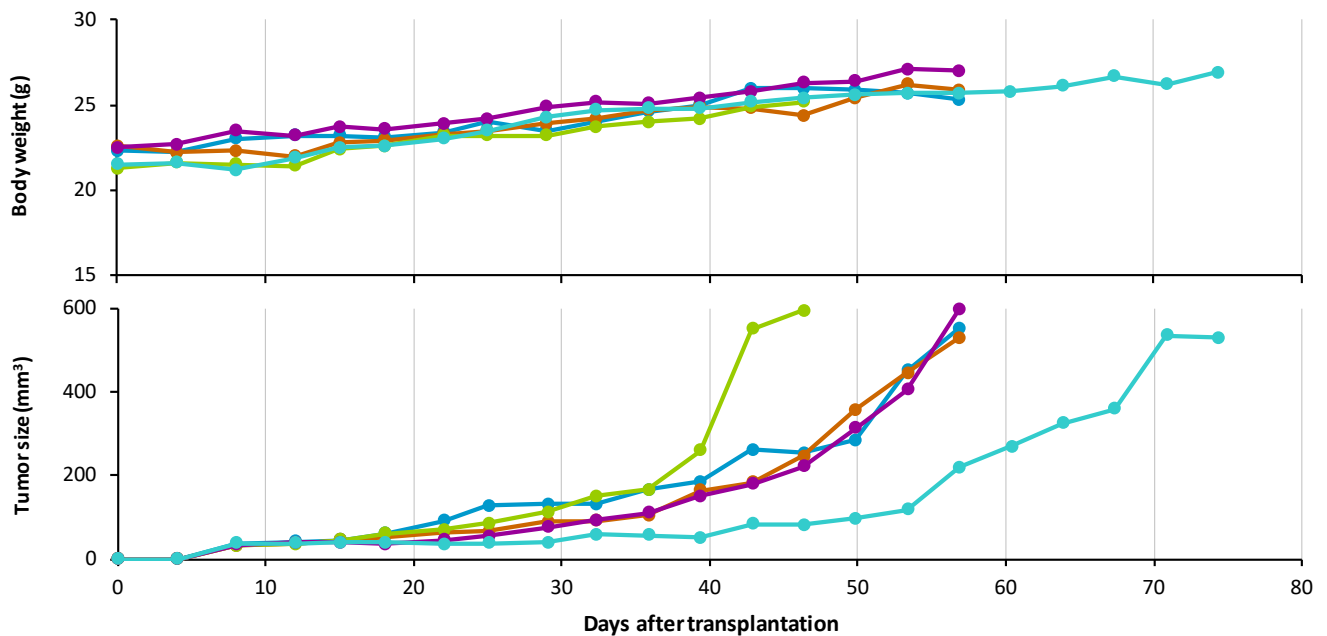


## 元腫瘍

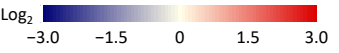


## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



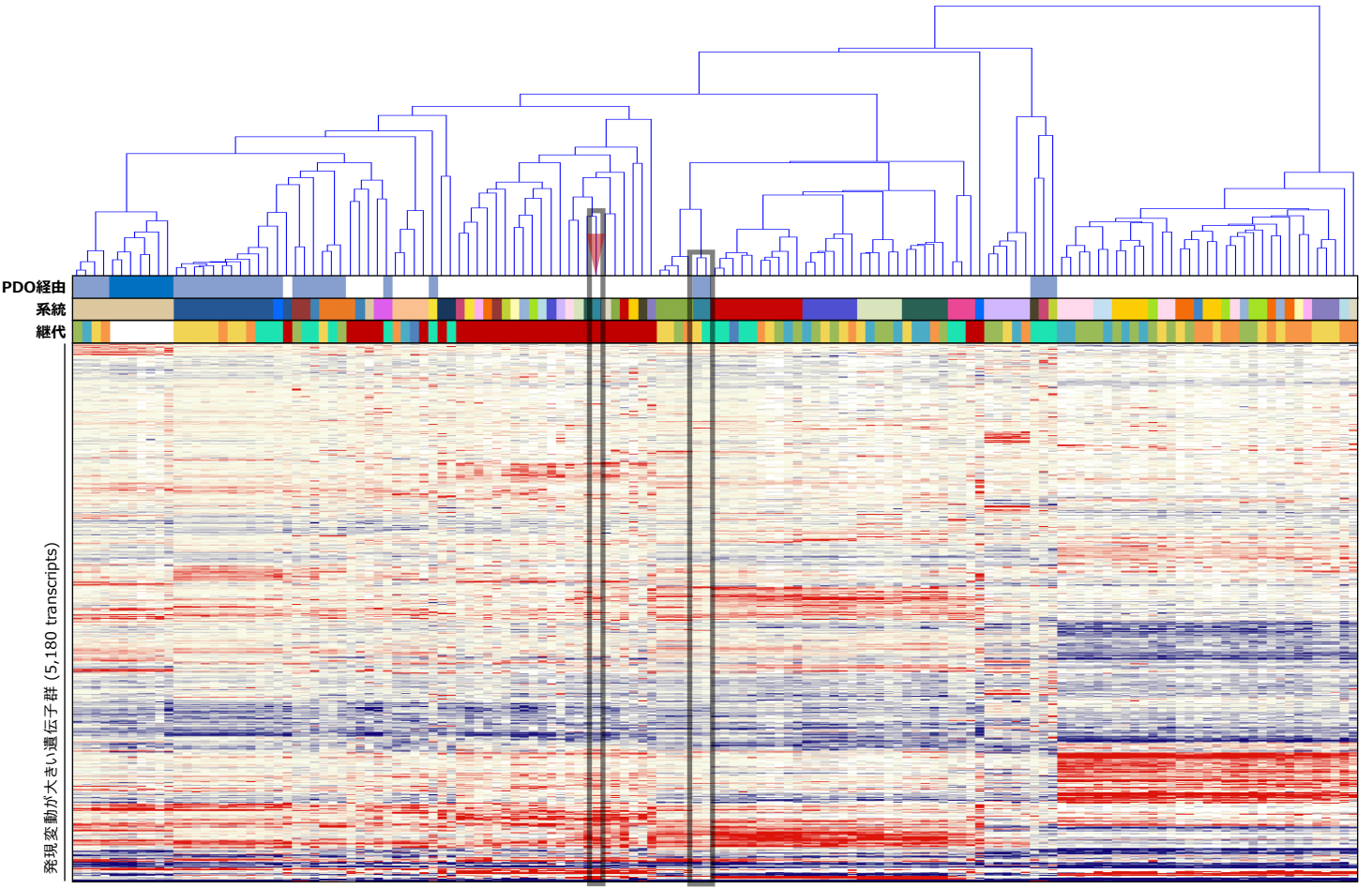
網羅的遺伝子発現解析 (クラスタ分析) による評価



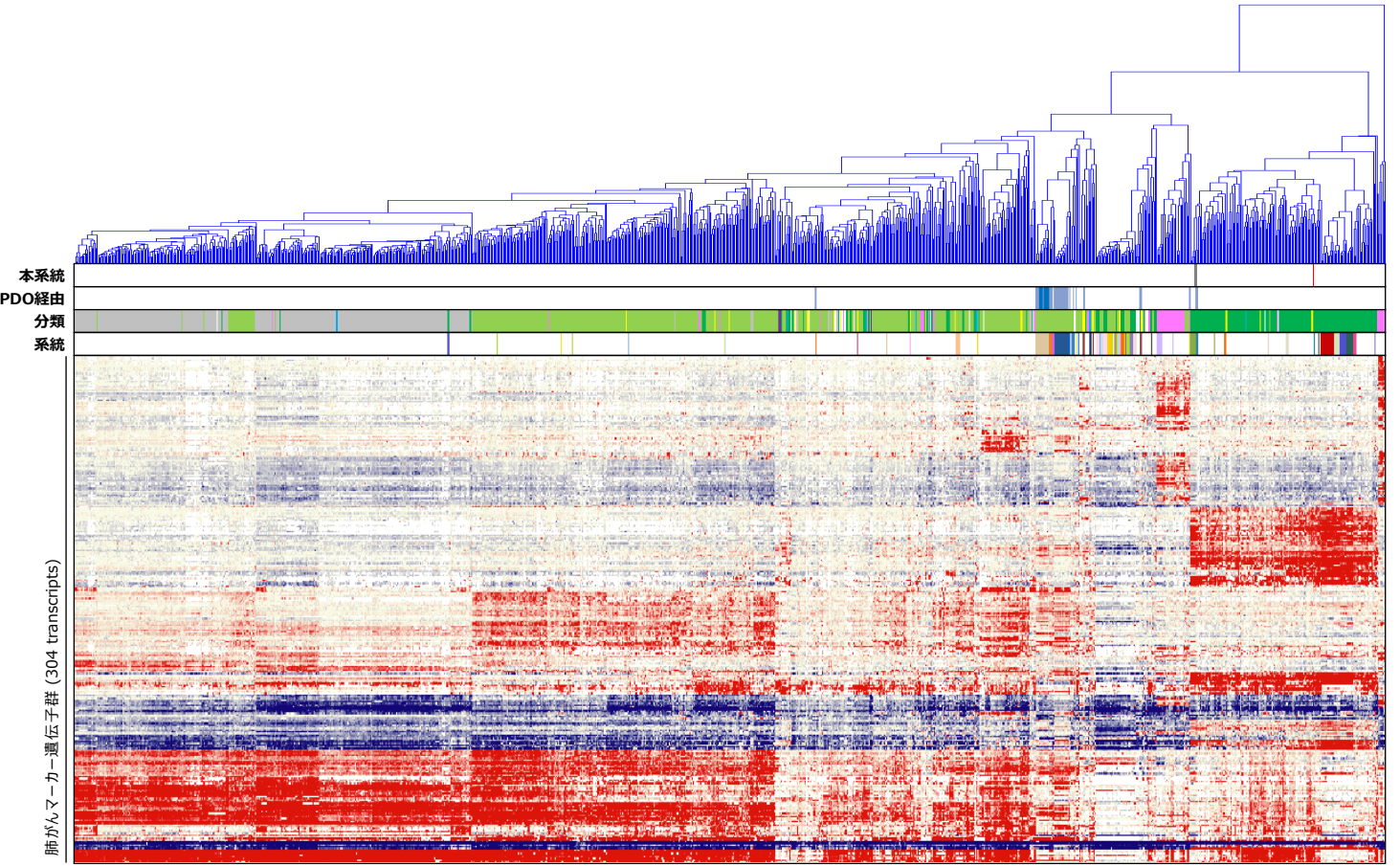
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN010 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN010 DLUN010 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKKB     |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO1   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO3   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0



臨床情報

F\_PDX\_000159

|                |                                     |         |        |         |   |
|----------------|-------------------------------------|---------|--------|---------|---|
| 臨床情報シート区分      |                                     | 肺腫瘍     |        |         |   |
| 性 別            | 男                                   | 年 齢     | 81 歳   | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span>          |         |        |         |   |
|                | 病理診断名                               |         | 診断コード  |         |   |
|                | 扁平上皮がん                              |         | L2.2   |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                            | T1      | (T1b ) |         |   |
|                | 所属リンパ節 (N)                          | N0      |        |         |   |
|                | 遠隔転移 (M)                            | M0      |        |         |   |
|                | ステージ                                | I       | (IA )  |         |   |
|                | 分化度 (G)                             | G2      | (>G3 ) |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                         | ly1     |        |         |   |
|                | 血管浸潤 (v)                            | v0      |        |         |   |
|                | 胸膜浸潤 (pl)                           | pl0     |        |         |   |
|                | 胸水/胸腔洗浄液                            | CLASS I | 異型細胞なし |         |   |
|                | 気管支断端 (br)                          | 陰性(-)   |        |         |   |
| 免疫組織学的<br>検 査  |                                     |         |        |         |   |
| 既 往 歴          | 狭心症, 右視床梗塞, 2型糖尿病, 胃潰瘍, 逆流性食道炎, 高血圧 |         |        |         |   |
| 放射線療法歴         |                                     |         |        |         |   |
| 薬剤治療歴          |                                     |         |        |         |   |
| 喫 煙 歴          | あり (現役)                             |         |        |         |   |
| 飲 酒 歴          | あり (習慣性)                            |         |        |         |   |
| 特 記 事 項        |                                     |         |        |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 18日

増殖速度 16.5 mm<sup>3</sup>/day

病理組織所見 腺扁平上皮がん

培養細胞化

## 移植サンプル

採取部位 原発巣(肺), F-PDO経由

性別 男性 年齢 68歳

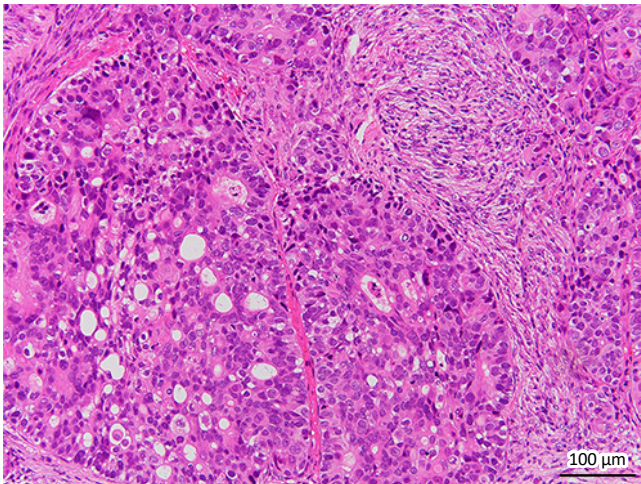
入手先 日本

病理組織所見 腺扁平上皮がん

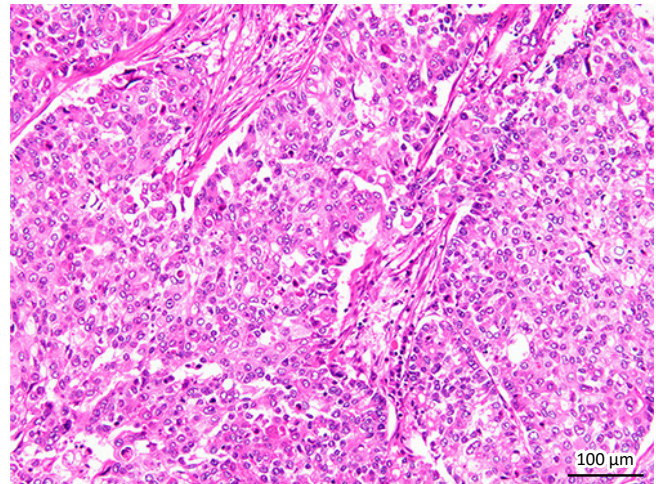
F-PDO系統 RLUN004-2 (F\_PDO\_000116)

## 病理組織像

## F-PDX®

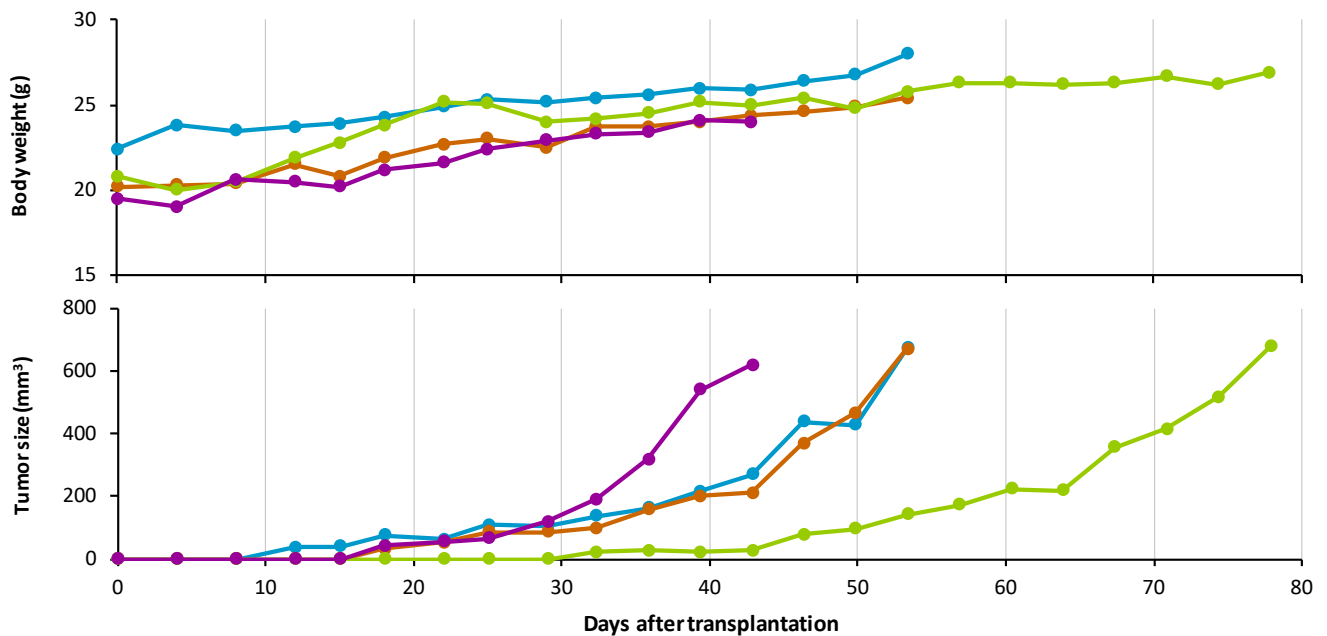


## 元腫瘍

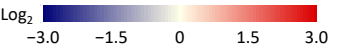


## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



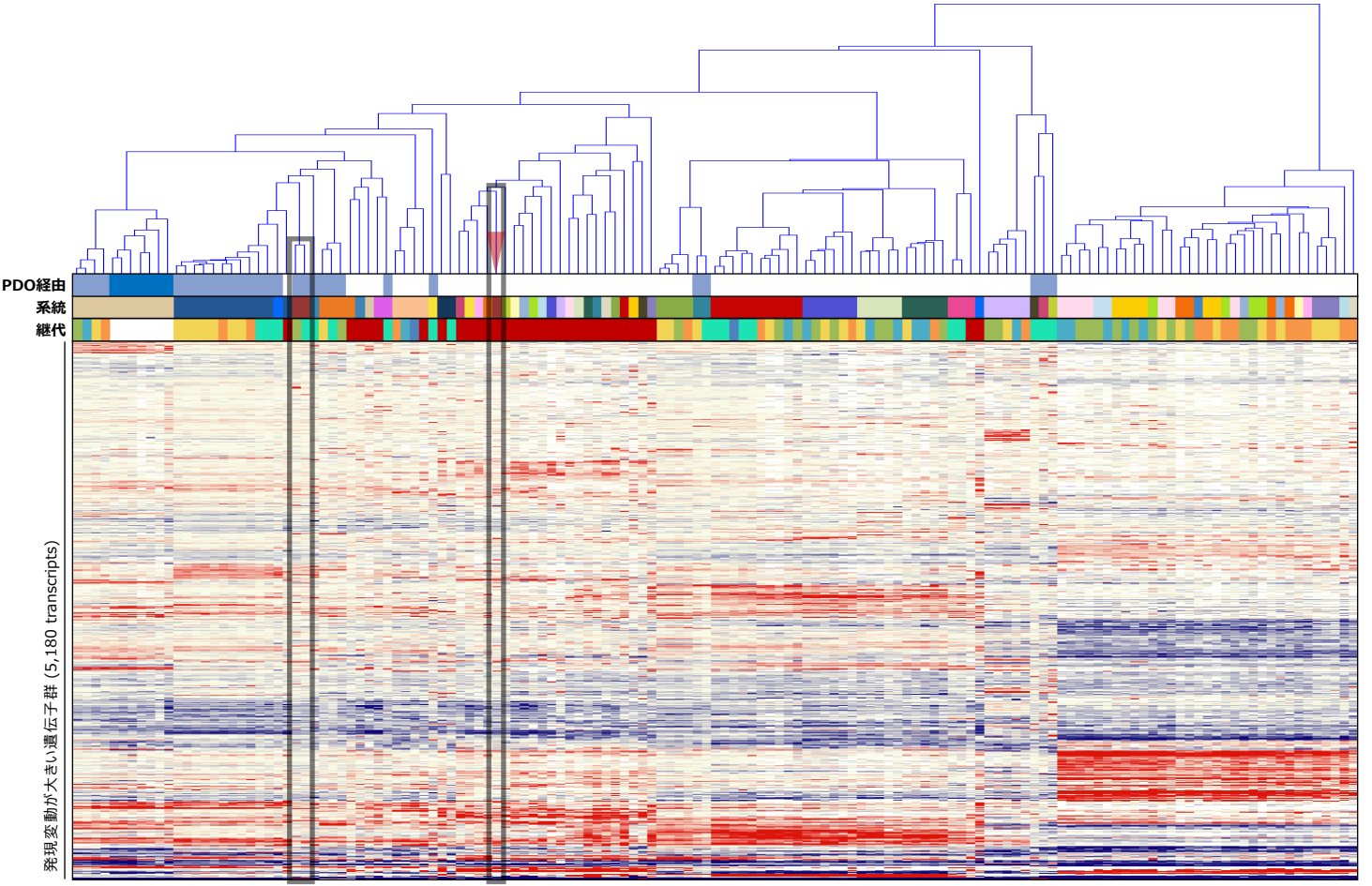
網羅的遺伝子発現解析 (クラスタ分析) による評価



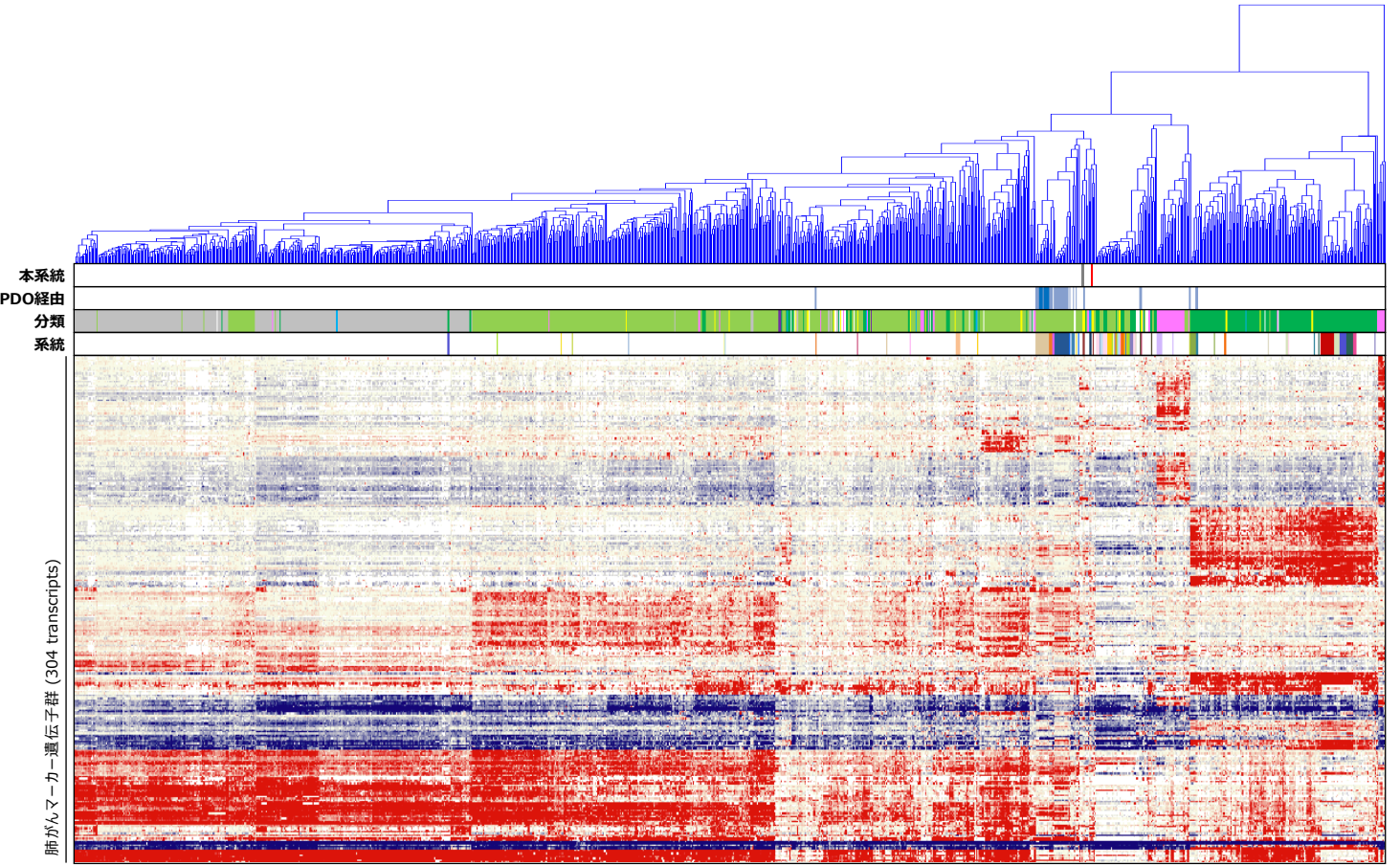
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN011 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN011 DLUN011 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000160

|                |               |         |              |         |       |               |
|----------------|---------------|---------|--------------|---------|-------|---------------|
| 臨床情報シート区分      |               | 肺腫瘍     |              |         |       |               |
| 性 別            | 男             | 年 齢     | 68 歳         | 採 取 部 位 | 肺     |               |
| 診 断 名          | 臓器分類: 肺、気管支 L |         |              |         |       |               |
|                | 病理診断名         |         | 診断コード        |         |       |               |
|                | 腺扁平上皮がん       |         | L2.3         |         |       |               |
| 病 期 分 類        | 原発腫瘍 (T)      | T2      | (T2b )       |         |       |               |
|                | 所属リンパ節 (N)    | N2      |              |         |       |               |
|                | 遠隔転移 (M)      | M0      |              |         |       |               |
|                | ステージ          | III     | (IIIA )      |         |       |               |
|                | 分化度 (G)       | G2      |              |         |       |               |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)   | ly1     |              |         |       |               |
|                | 血管浸潤 (v)      | v1      |              |         |       |               |
|                | 胸膜浸潤 (pl)     | pl1     |              |         |       |               |
|                | 胸水/胸腔洗浄液      | CLASS I |              |         |       |               |
|                | 気管支断端 (br)    | 陰性(-)   |              |         |       |               |
| 免疫組織学的<br>検 査  | CEA           | 陽性(+)   | (腺がん領域)      | CEA     | 陽性(+) | focal(SCC領域)  |
|                | TTF-1         | 陰性(-)   | (腺がん領域)      | TTF-1   | 陰性(-) | (SCC領域)       |
|                | CK5/6         | 陰性(-)   | (腺がん領域)      | CK5/6   | 陽性(+) | focal(SCC領域)  |
|                | p63           | 陰性(-)   | (腺がん領域)      | p63     | 陽性(+) | focal弱(SCC領域) |
|                | ALK融合蛋白       | 陰性(-)   | (腺がん/扁平上皮がん) |         |       |               |
|                |               |         |              |         |       |               |
| 既 往 歴          |               |         |              |         |       |               |
| 放射線療法歴         |               |         |              |         |       |               |
| 薬剤治療歴          |               |         |              |         |       |               |
| 喫 煙 歴          | あり (現役)       |         |              |         |       |               |
| 飲 酒 歴          | あり (習慣性)      |         |              |         |       |               |
| 特 記 事 項        |               |         |              |         |       |               |

GEP SNV CNV HLA

基本属性

F-PDX®

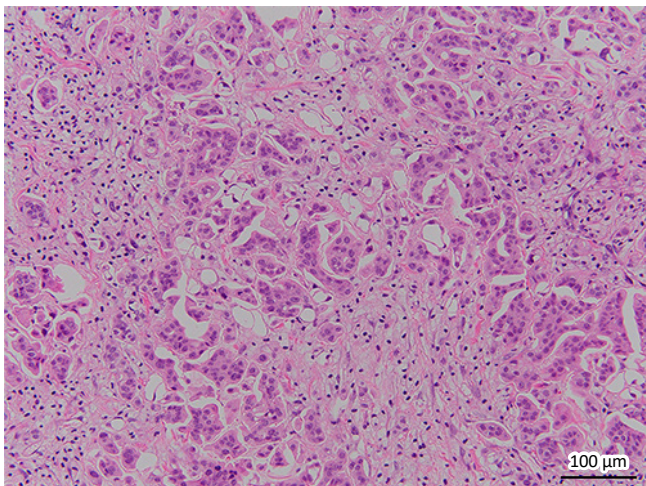
|        |                          |      |    |
|--------|--------------------------|------|----|
| 移植動物系統 | NOG                      | 移植部位 | 皮下 |
| 生着日数   | 12 日                     |      |    |
| 増殖速度   | 2.3 mm <sup>3</sup> /day |      |    |
| 病理組織所見 | コロイド腺がん                  |      |    |
| 培養細胞化  |                          |      |    |

移植サンプル

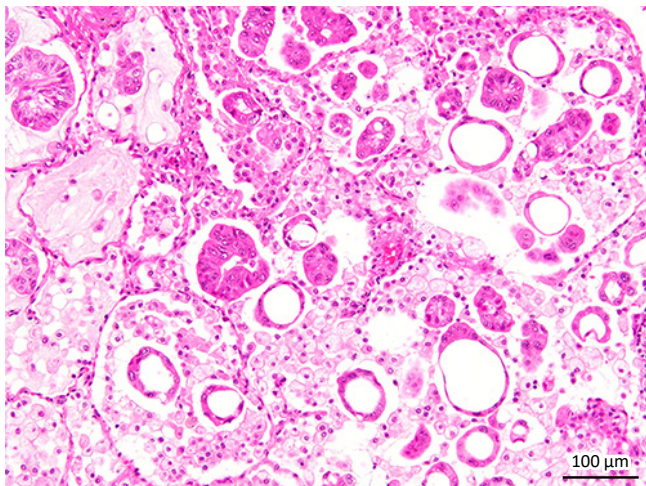
|         |                          |     |      |
|---------|--------------------------|-----|------|
| 採 取 部 位 | 原発巣 (肺), F-PDO経由         |     |      |
| 性 別     | 女性                       | 年 齢 | 66 歳 |
| 入 手 先   | 日本                       |     |      |
| 病理組織所見  | コロイド腺がん                  |     |      |
| F-PDO系統 | RLUN010-2 (F_PDO_000077) |     |      |

病理組織像

F-PDX®

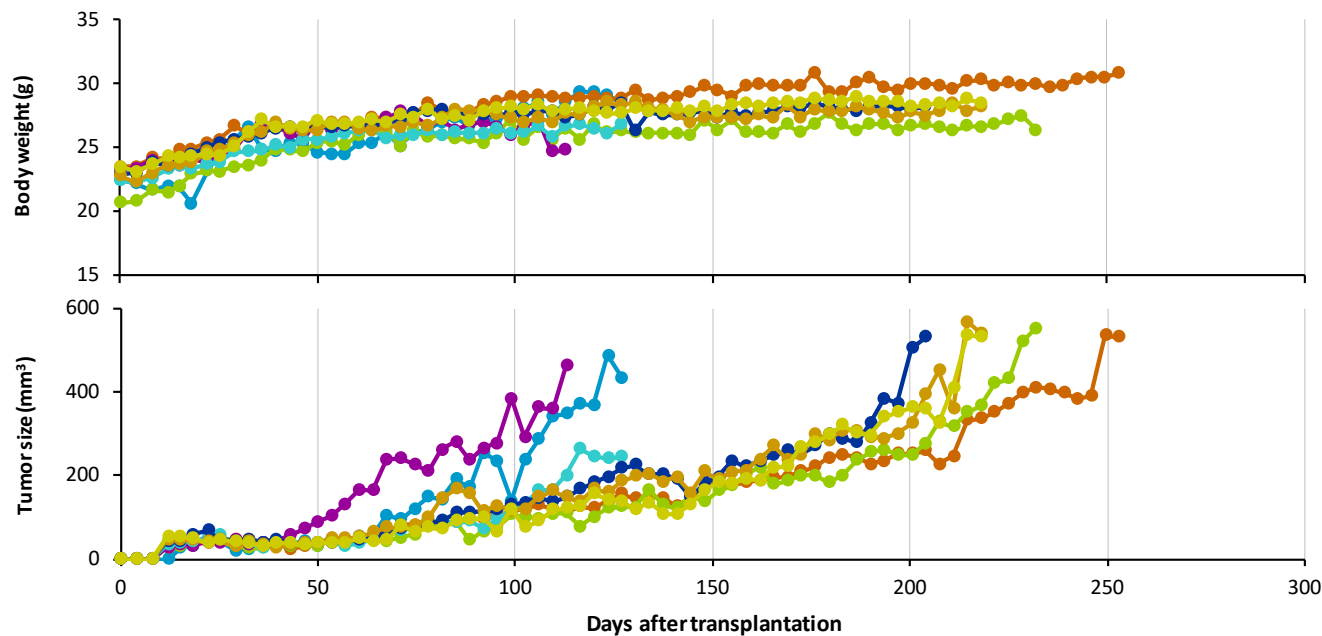


元腫瘍



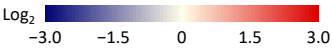
移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





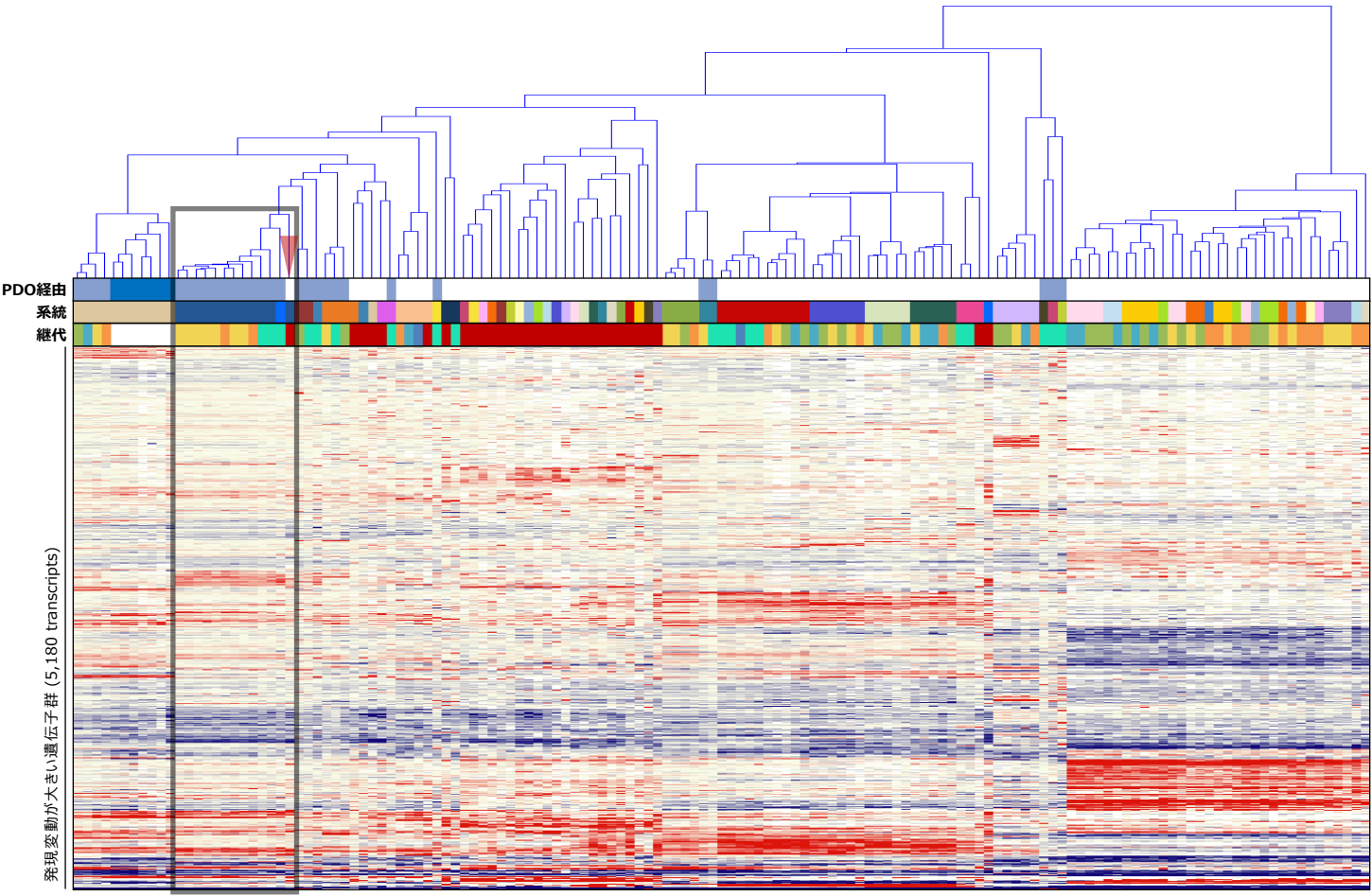
網羅的遺伝子発現解析 (クラスタ分析) による評価



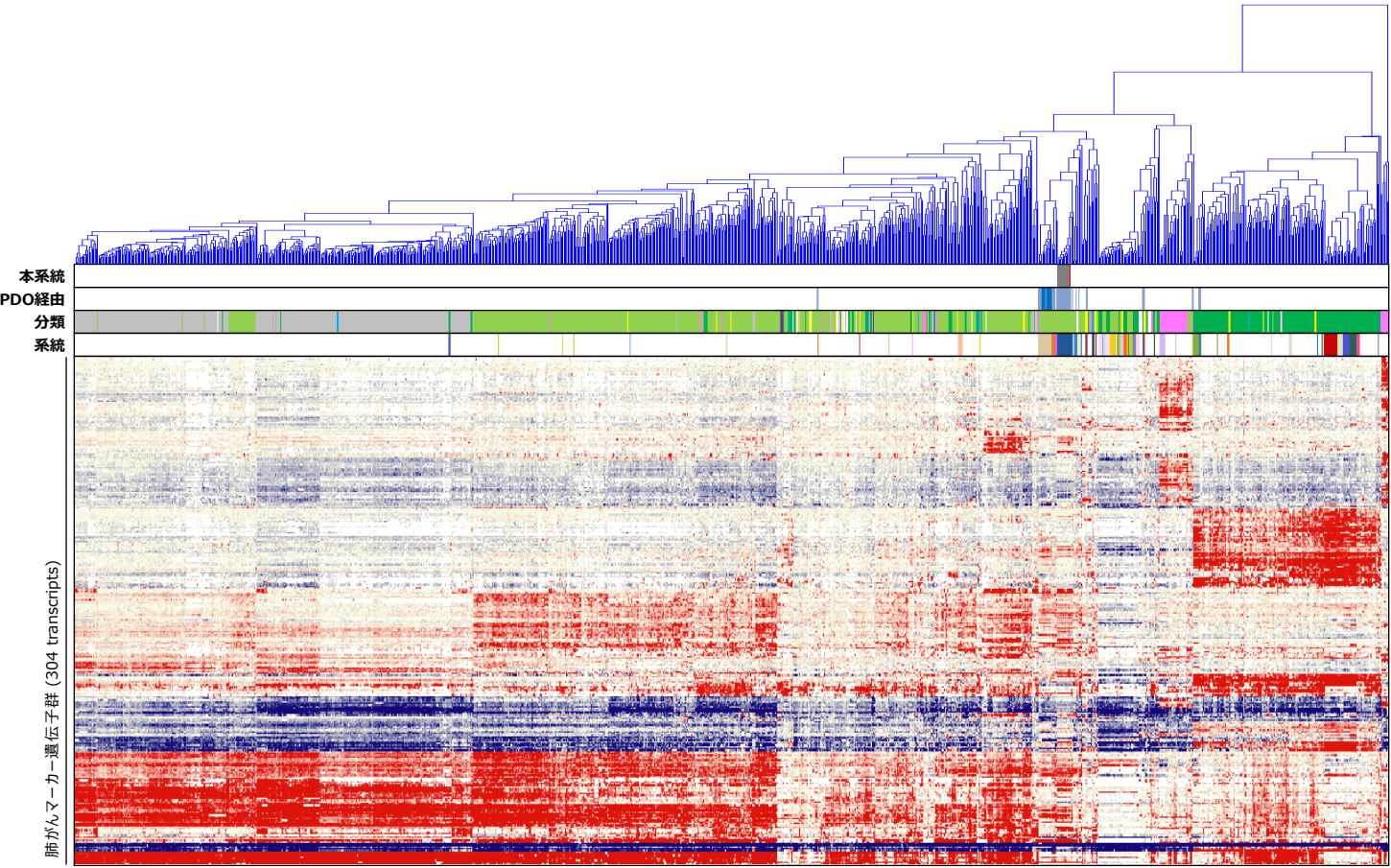
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN012 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN012 DLUN012 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CNCE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK     |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CND2         |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO1   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO3   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
◆ Inframe Indel  
▼ Stop Loss  
✦ Frameshift Indel  
♥ Nonsense  
● Other  
★ Fusion  
+ ITD  
✳ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000161

|                |                            |         |          |         |   |
|----------------|----------------------------|---------|----------|---------|---|
| 臨床情報シート区分      |                            | 肺腫瘍     |          |         |   |
| 性 別            | 女                          | 年 齢     | 66 歳     | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span> |         |          |         |   |
|                | 病理診断名                      |         | 診断コード    |         |   |
|                | コロイド腺がん                    |         | L2.1.08  |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                   | T2      | ( T2a )  |         |   |
|                | 所属リンパ節 (N)                 | N2      |          |         |   |
|                | 遠隔転移 (M)                   | M0      |          |         |   |
|                | ステージ                       | III     | ( IIIA ) |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                | ly0     |          |         |   |
|                | 血管浸潤 (v)                   | v0      |          |         |   |
|                | 胸膜浸潤 (pl)                  | pl0     |          |         |   |
|                | 胸水/胸腔洗浄液                   | CLASS I |          |         |   |
|                | 気管支断端 (br)                 | 陰性(-)   |          |         |   |
| 免疫組織学的<br>検 査  | ALK融合蛋白                    | 陰性(-)   |          |         |   |
|                |                            |         |          |         |   |
| 既 往 歴          |                            |         |          |         |   |
| 放射線療法歴         |                            |         |          |         |   |
| 薬剤治療歴          |                            |         |          |         |   |
| 喫 煙 歴          | なし                         |         |          |         |   |
| 飲 酒 歴          | なし                         |         |          |         |   |
| 特 記 事 項        |                            |         |          |         |   |

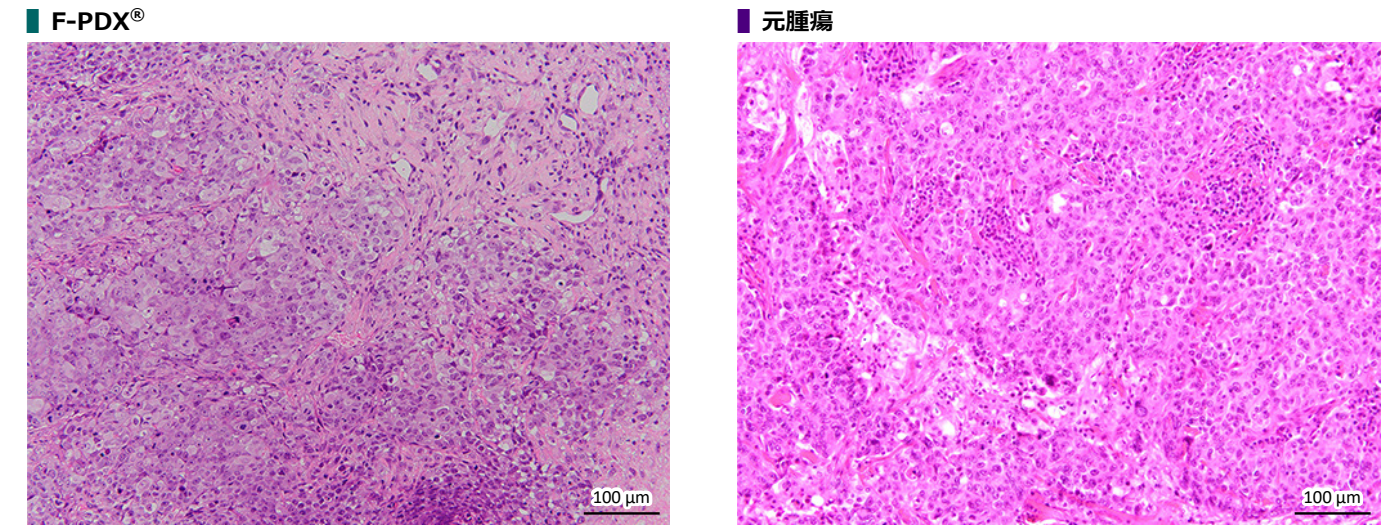


GEP SNV CNV HLA

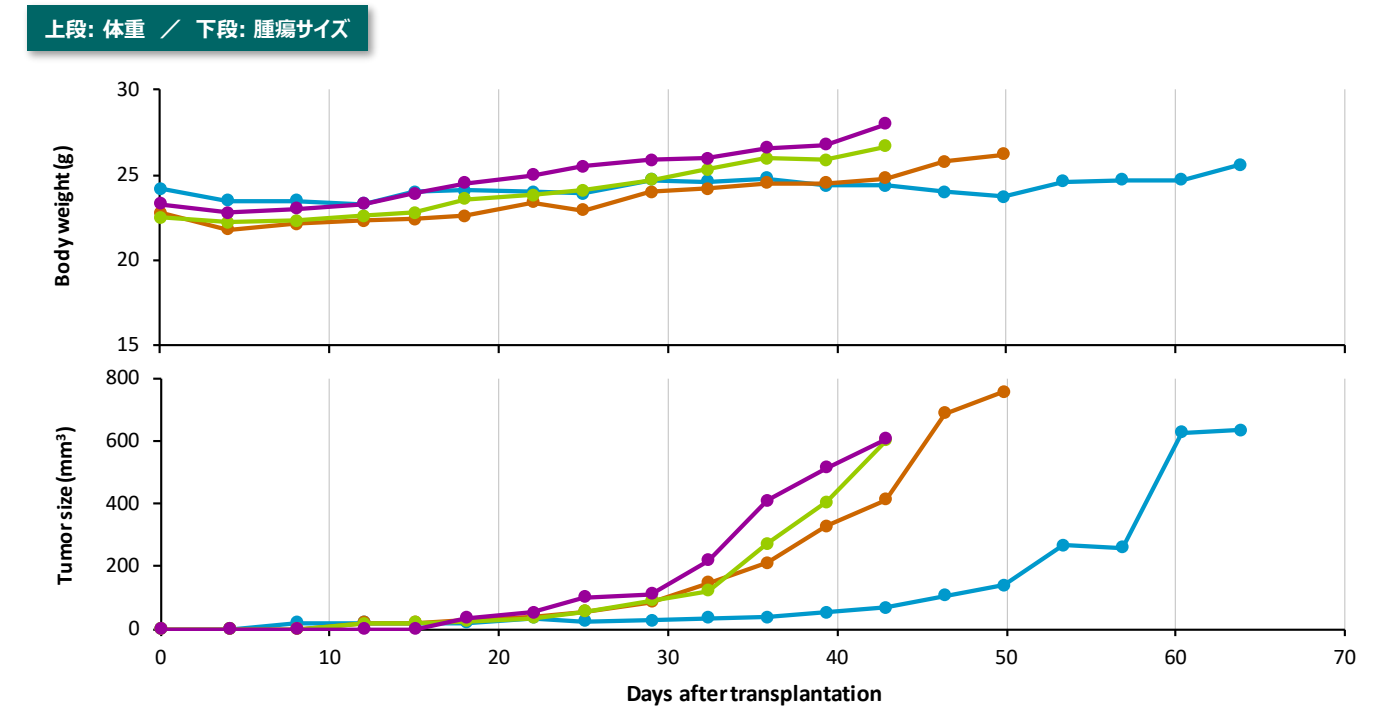
基本属性

|        |              |  |      |         |                          |    |      |
|--------|--------------|--|------|---------|--------------------------|----|------|
| F-PDX® |              |  |      | 移植サンプル  |                          |    |      |
| 移植動物系統 | NOG          |  | 移植部位 | 皮下      |                          |    |      |
| 生着日数   | 12 日         |  |      | 性別      | 男性                       | 年齢 | 54 歳 |
| 増殖速度   | 17.2 mm³/day |  |      | 入手先     | 日本                       |    |      |
| 病理組織所見 | 未分化がん        |  |      | 病理組織所見  | 扁平上皮がん                   |    |      |
| 培養細胞化  |              |  |      | F-PDO系統 | RLUN016-2 (F_PDO_000124) |    |      |

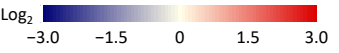
病理組織像



移植後の推移



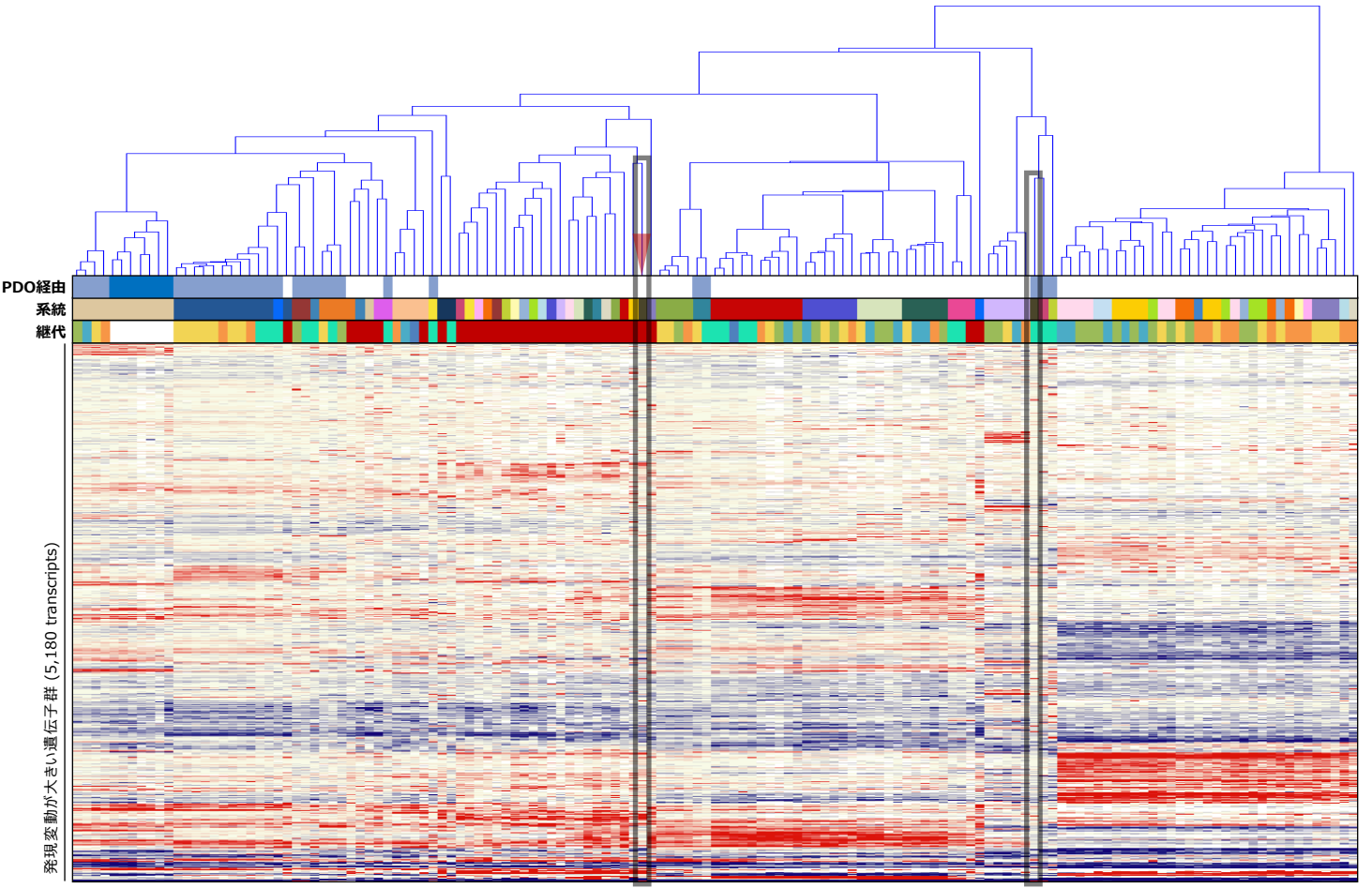
網羅的遺伝子発現解析 (クラスタ分析) による評価



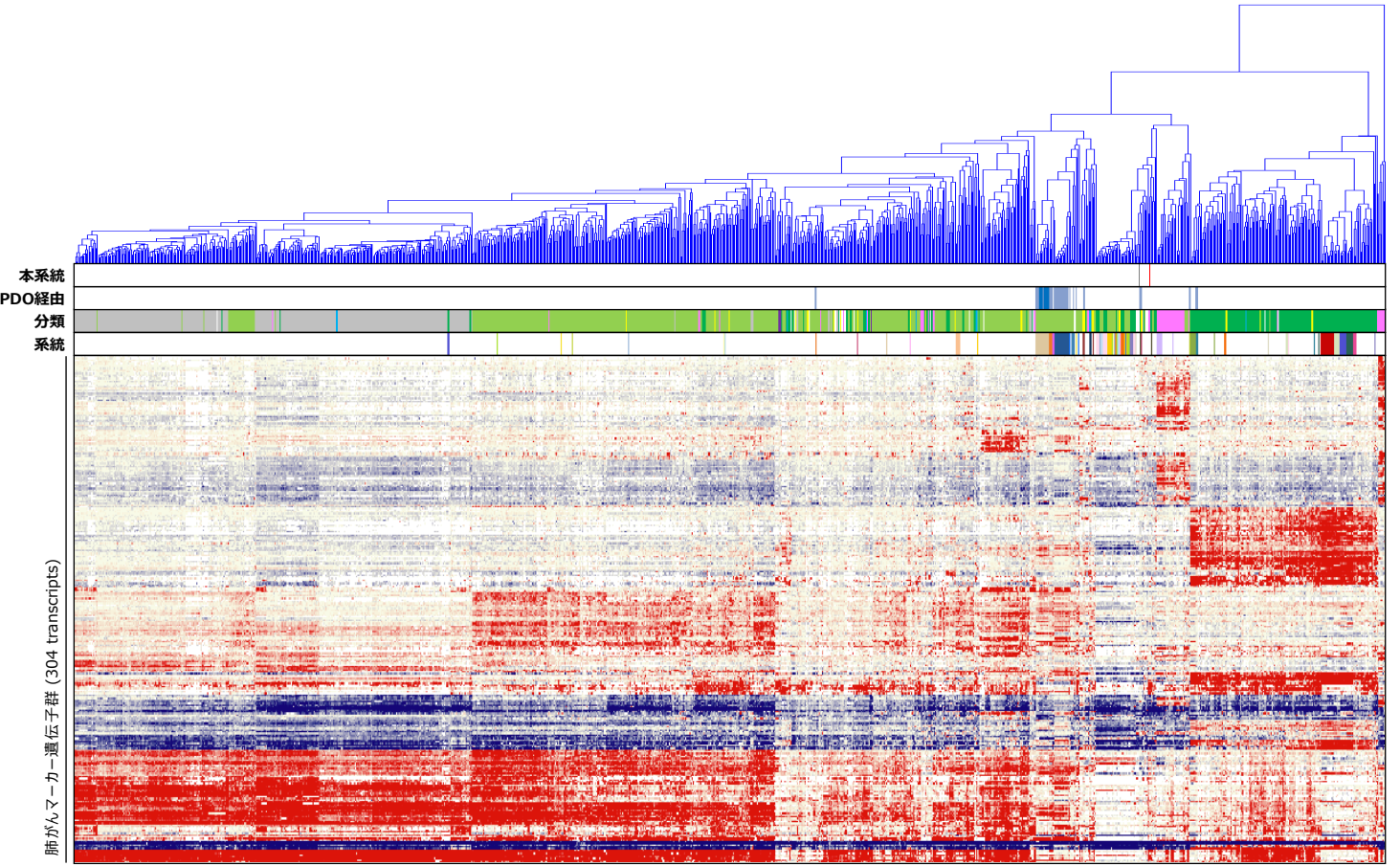
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN013 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN013 DLUN013 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CEND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXR     |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXR8    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO1   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO3   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】

◆ Missense

◆ Inframe Indel

▼ Stop Loss

◆ Frameshift Indel

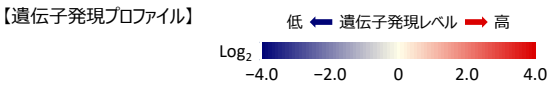
♥ Nonsense

● Other

★ Fusion

✚ ITD

✳ Multiple





臨床情報

F\_PDX\_000162

|                |                                                   |         |          |            |       |
|----------------|---------------------------------------------------|---------|----------|------------|-------|
| 臨床情報シート区分      |                                                   | 肺腫瘍     |          |            |       |
| 性 別            | 男                                                 | 年 齢     | 54 歳     | 採 取 部 位    | 肺     |
| 診 断 名          | 臓器分類: 肺、気管支 <span style="color: orange;">L</span> |         |          |            |       |
|                | 病理診断名                                             |         | 診断コード    |            |       |
|                | 扁平上皮がん                                            |         | L2.2     |            |       |
| 病 期 分 類        | 原発腫瘍 (T)                                          | T2      | (T2a )   |            |       |
|                | 所属リンパ節 (N)                                        | N1      |          |            |       |
|                | 遠隔転移 (M)                                          | M0      |          |            |       |
|                | ステージ                                              | II      | (IIA )   |            |       |
|                | 分化度 (G)                                           | G2      |          |            |       |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                       | ly1     |          | 肺動脈断端 (pa) | 陰性(-) |
|                | 血管浸潤 (v)                                          | v1      |          | 肺静脈断端 (pv) | 陰性(-) |
|                | 胸膜浸潤 (pl)                                         | pl1     |          |            |       |
|                | 胸水/胸腔洗浄液                                          | CLASS I |          |            |       |
|                | 気管支断端 (br)                                        | 陰性(-)   |          |            |       |
| 免疫組織学的<br>検 査  | AE1/AE3                                           | 陽性(+)   | (気管支鏡検査) |            |       |
|                | p63                                               | 一部陽性    | (気管支鏡検査) |            |       |
|                | TTF-1                                             | 陰性(-)   | (気管支鏡検査) |            |       |
|                | CK5/6                                             | 陰性(-)   | (気管支鏡検査) |            |       |
|                | Alcian blue 染色                                    | 陰性(-)   | (気管支鏡検査) |            |       |
| 既 往 歴          | 高血圧, 大腸ポリープ, 虫垂炎                                  |         |          |            |       |
| 放射線療法歴         |                                                   |         |          |            |       |
| 薬剤治療歴          |                                                   |         |          |            |       |
| 喫 煙 歴          | あり (現役)                                           |         |          |            |       |
| 飲 酒 歴          | あり (習慣性)                                          |         |          |            |       |
| 特 記 事 項        |                                                   |         |          |            |       |

GEP SNV CNV HLA

基本属性

F-PDX®

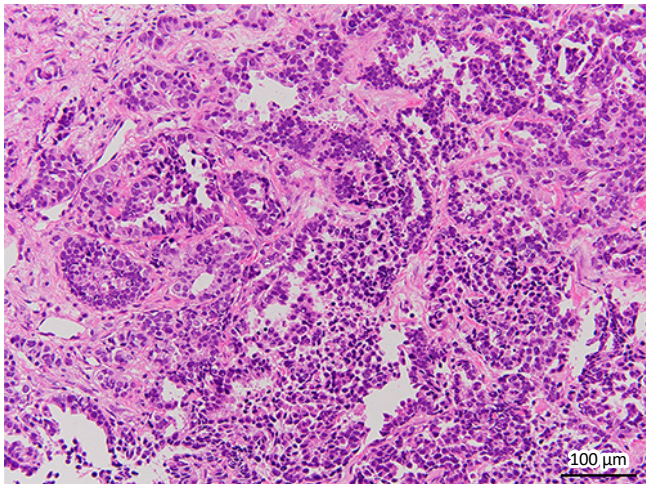
|        |             |      |    |
|--------|-------------|------|----|
| 移植動物系統 | NOG         | 移植部位 | 皮下 |
| 生着日数   | 24 日        |      |    |
| 増殖速度   | 5.0 mm³/day |      |    |
| 病理組織所見 | 乳頭型腺がん      |      |    |
| 培養細胞化  |             |      |    |

移植サンプル

|         |                                |    |      |
|---------|--------------------------------|----|------|
| 採取部位    | 転移巣 (胸水), 再発, F-PDO経由          |    |      |
| 性別      | 男性                             | 年齢 | 59 歳 |
| 入手先     | 日本                             |    |      |
| 病理組織所見  | 肺腫瘍の転移; 乳頭型腺がん; 充実型腺がん; 置換型腺がん |    |      |
| F-PDO系統 | RLUN022 (F_PDO_000092)         |    |      |

病理組織像

F-PDX®

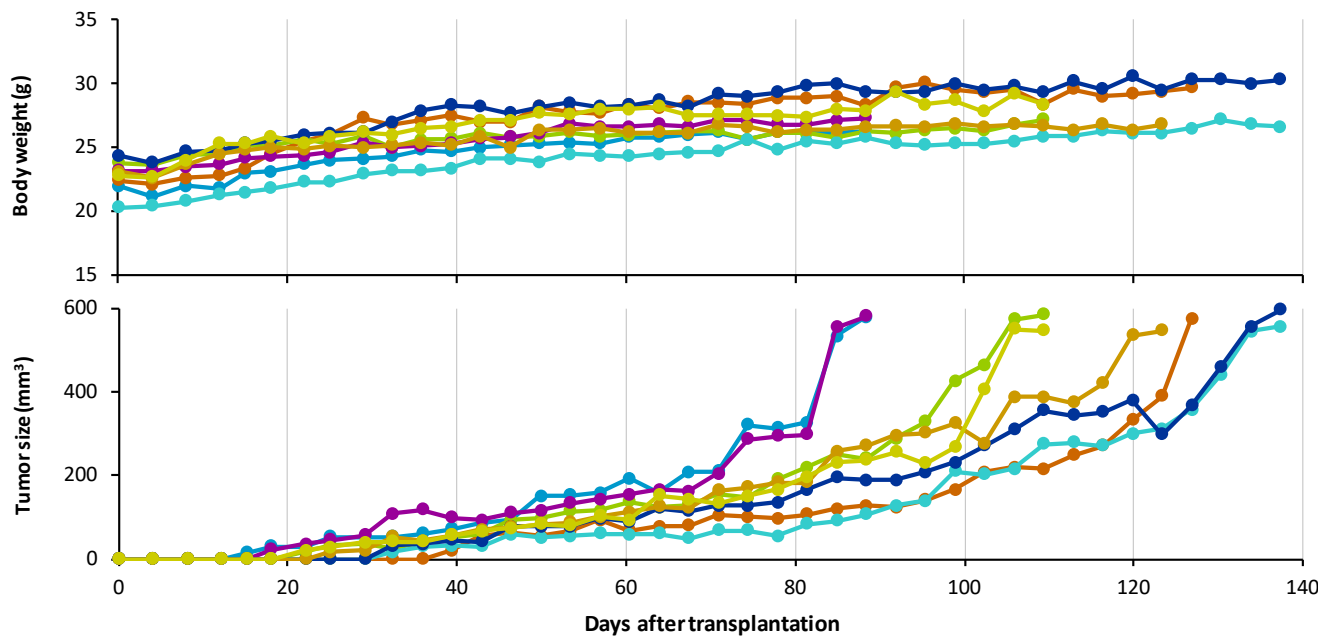


元腫瘍

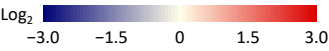


移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



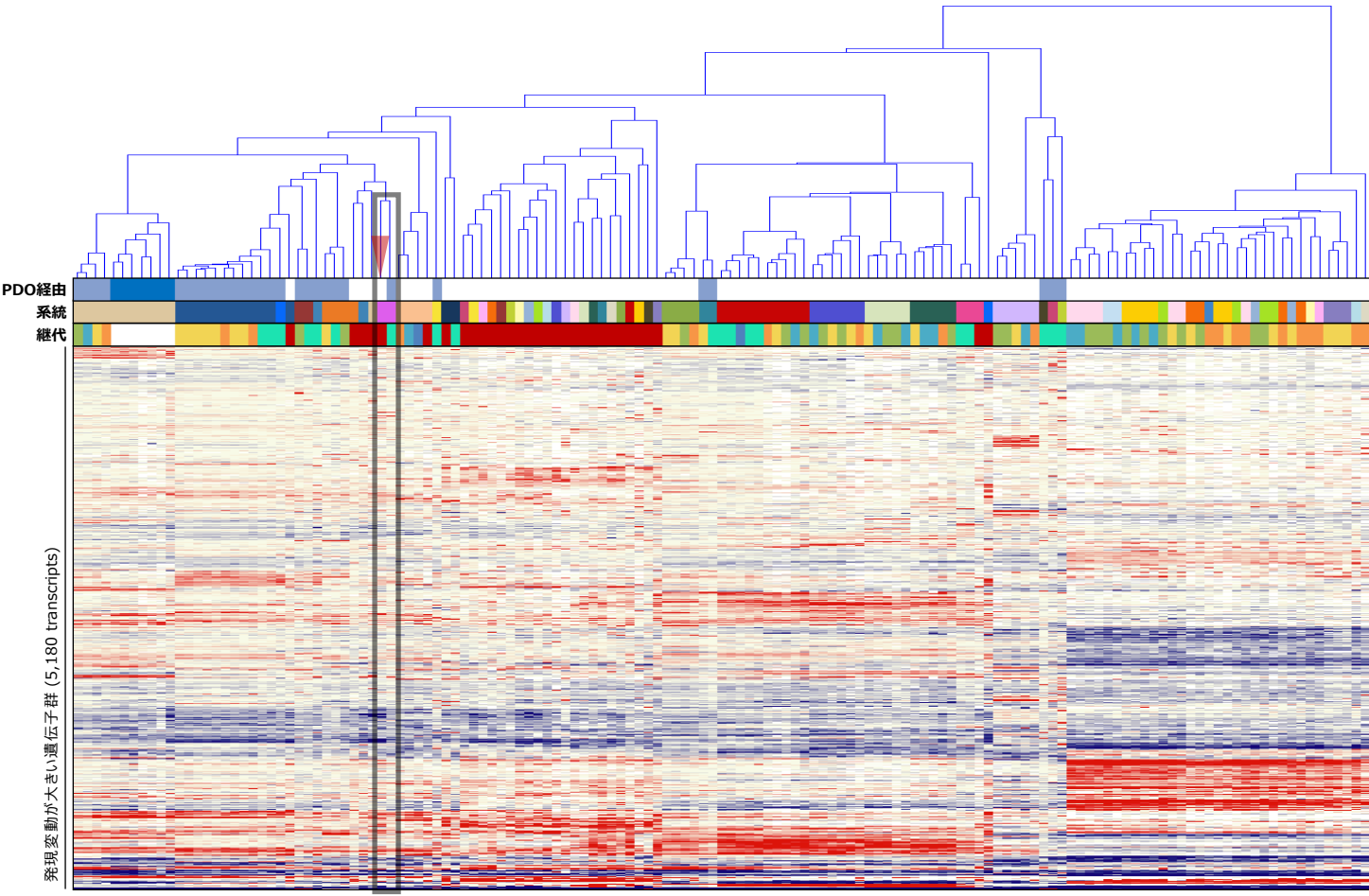
網羅的遺伝子発現解析 (クラスタ分析) による評価



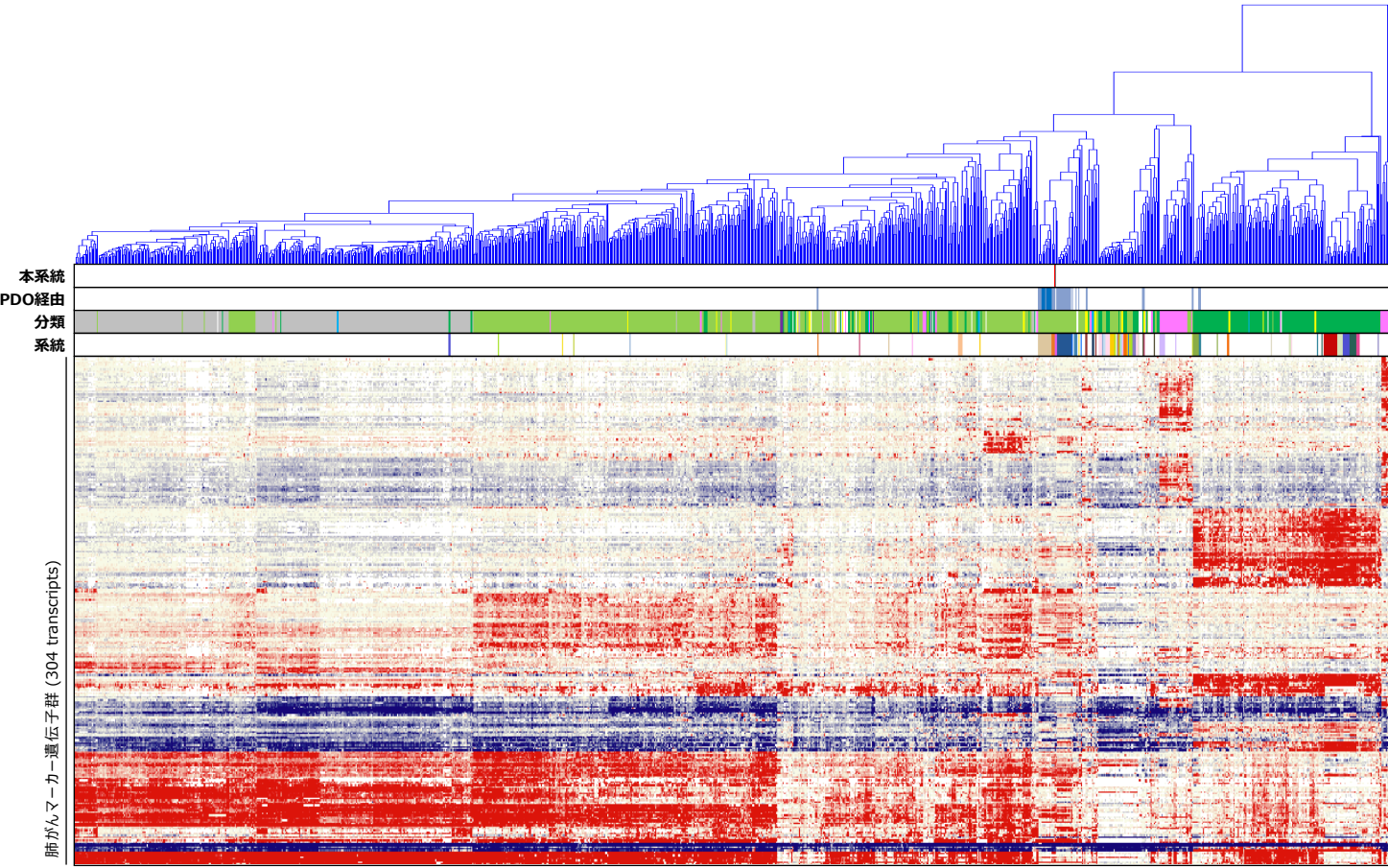
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN014 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN014 DLUN014 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   | *   | *   |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     | ◆   | *   |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXR8    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     | ♠   | ♠   |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
♠ Missense  
♠ Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000163

|             |                                                                                          |     |         |         |    |
|-------------|------------------------------------------------------------------------------------------|-----|---------|---------|----|
| 臨床情報シート区分   |                                                                                          | 肺腫瘍 |         |         |    |
| 性 別         | 男                                                                                        | 年 齢 | 59 歳    | 採 取 部 位 | 胸水 |
| 診 断 名       | 臓器分類: 肺、気管支 <span>L</span>                                                               |     |         |         |    |
|             | 病理診断名                                                                                    |     | 診断コード   |         |    |
|             | 肺腫瘍の転移                                                                                   |     | L6      |         |    |
|             | 乳頭型腺がん                                                                                   |     | L2.1.03 |         |    |
|             | 充実型腺がん                                                                                   |     | L2.1.05 |         |    |
|             | 置換型腺がん                                                                                   |     | L2.1.01 |         |    |
| 病 期 分 類     | 原発腫瘍 (T)                                                                                 | T1  | ( T1a ) | ( 原発 )  |    |
|             | 所属リンパ節 (N)                                                                               | N1  |         | ( 原発 )  |    |
|             | 遠隔転移 (M)                                                                                 | M0  |         | ( 原発 )  |    |
|             | ステージ                                                                                     | II  | ( IIA ) | ( 原発 )  |    |
|             | 分化度 (G)                                                                                  | G2  | ( >G3 ) | ( 原発 )  |    |
| 手 術・病 理 所 見 | 胸水/胸腔洗浄液 CLASS V 異型細胞あり                                                                  |     |         |         |    |
| 免疫組織学的 検 査  |                                                                                          |     |         |         |    |
| 既 往 歴       | 後頭葉動静脈異常, 虫垂炎切除術, 肺がん, 症候性てんかん, 閉塞性換気障害                                                  |     |         |         |    |
| 放射線療法歴      | あり (骨転移巣)                                                                                |     |         |         |    |
| 薬剤治療歴       | カルボプラチン, テガフル, ギメラシル, オテラシルカリウム, ゲフィチニブ, シスプラチン, ペメトレキセドナトリウム水和物, ペバシズマブ, パクリタキセル, デノスマブ |     |         |         |    |
| 喫 煙 歴       | あり (過去)                                                                                  |     |         |         |    |
| 飲 酒 歴       |                                                                                          |     |         |         |    |
| 特 記 事 項     |                                                                                          |     |         |         |    |

GEP SNV CNV HLA

基本属性

F-PDX®

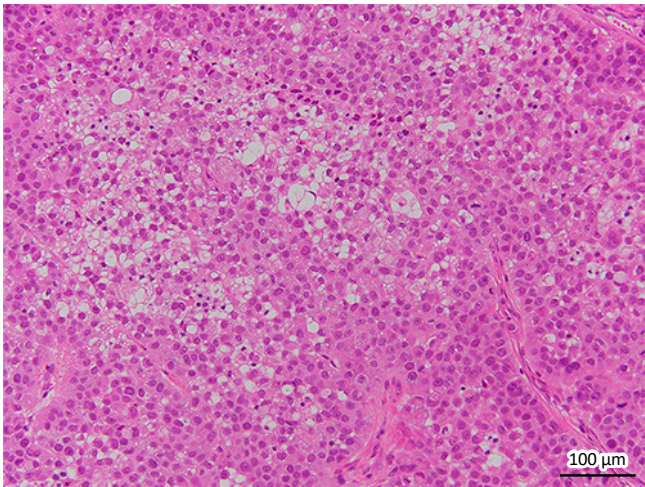
|        |                           |      |    |
|--------|---------------------------|------|----|
| 移植動物系統 | NOG                       | 移植部位 | 皮下 |
| 生着日数   | 15日                       |      |    |
| 増殖速度   | 13.3 mm <sup>3</sup> /day |      |    |
| 病理組織所見 | 腺がん                       |      |    |
| 培養細胞化  |                           |      |    |

移植サンプル

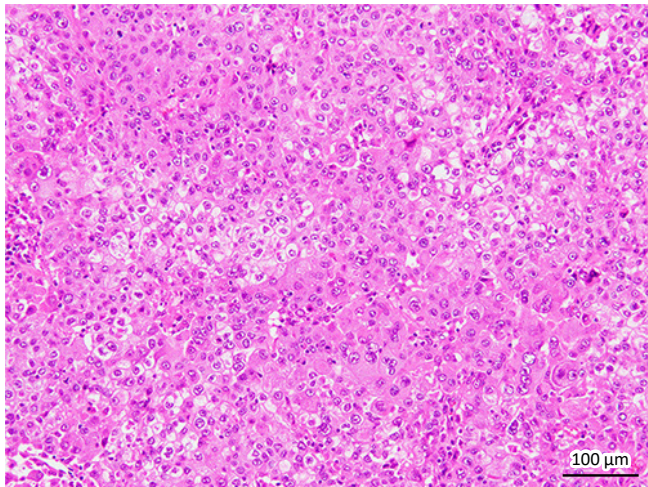
|         |         |    |      |
|---------|---------|----|------|
| 採取部位    | 原発巣 (肺) |    |      |
| 性別      | 男性      | 年齢 | 59 歳 |
| 入手先     | 日本      |    |      |
| 病理組織所見  | がん肉腫    |    |      |
| F-PDO系統 |         |    |      |

病理組織像

F-PDX®

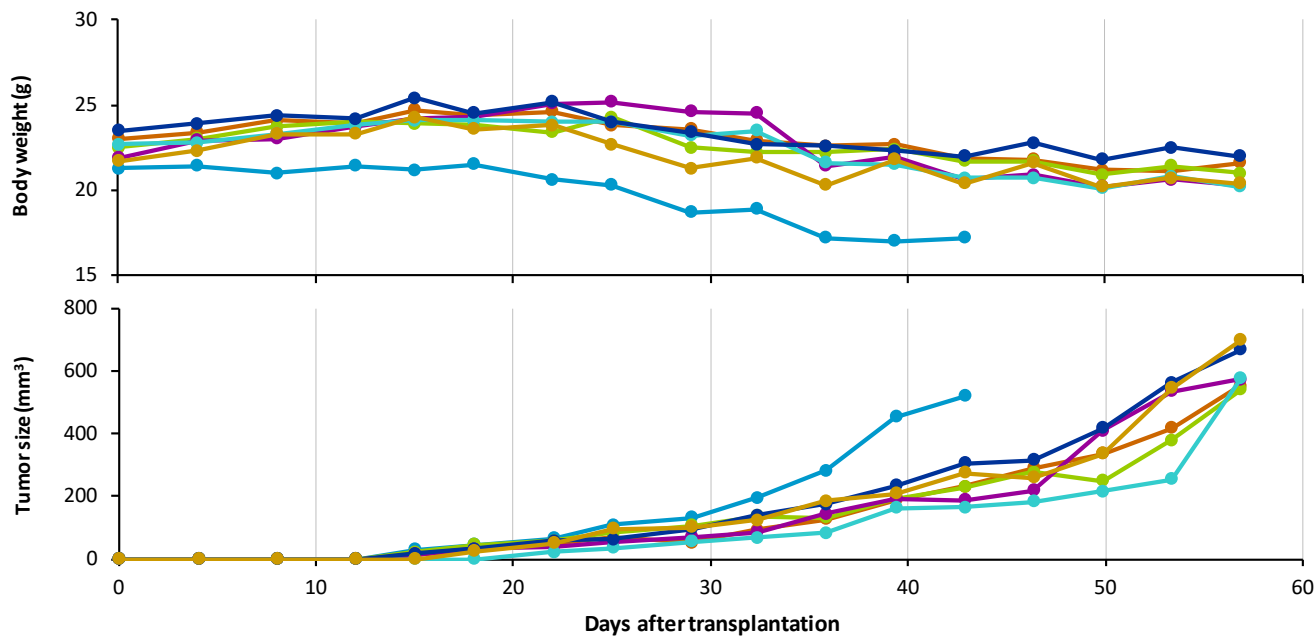


元腫瘍



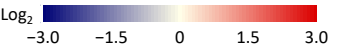
移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





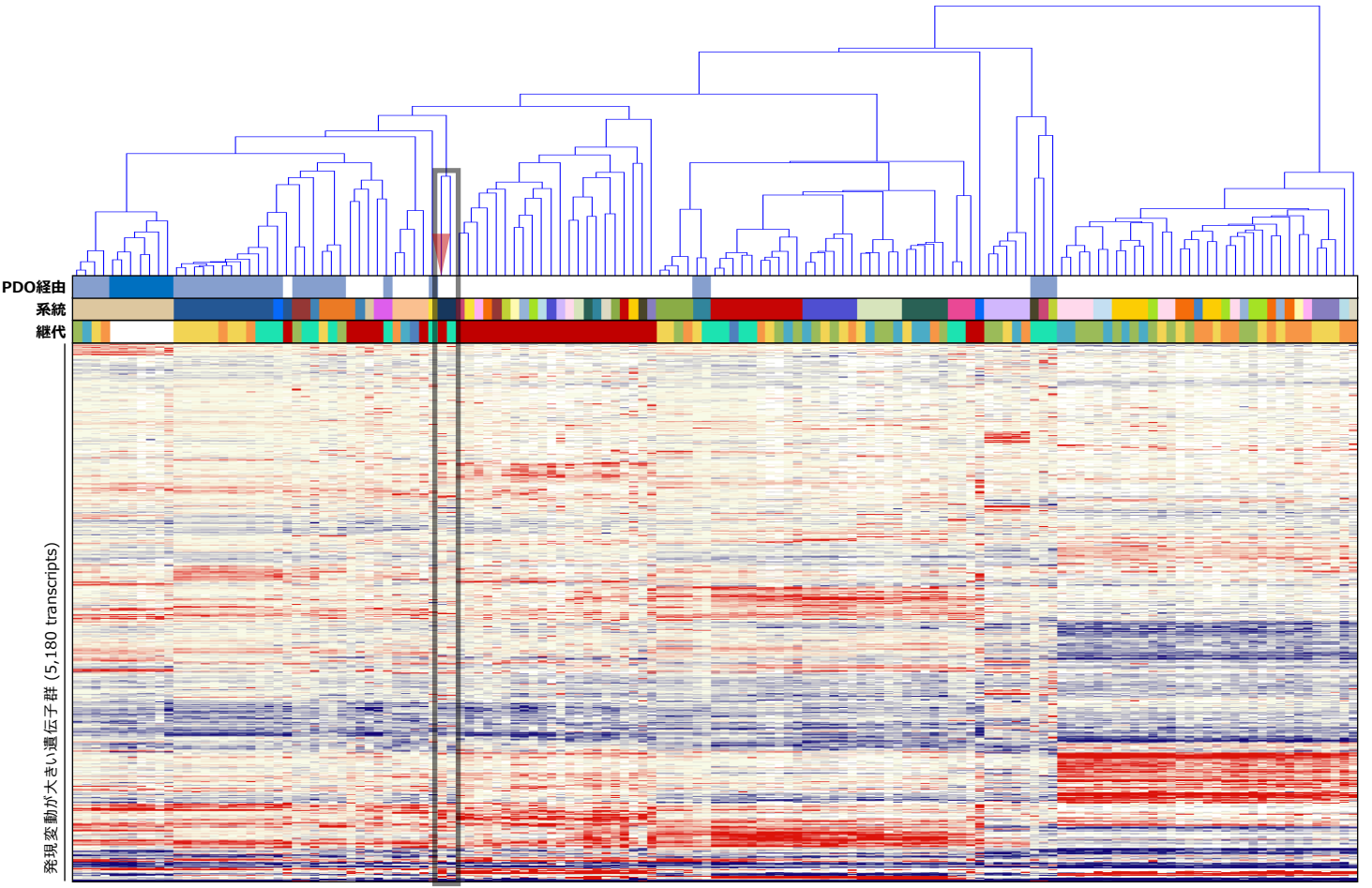
網羅的遺伝子発現解析 (クラスタ分析) による評価



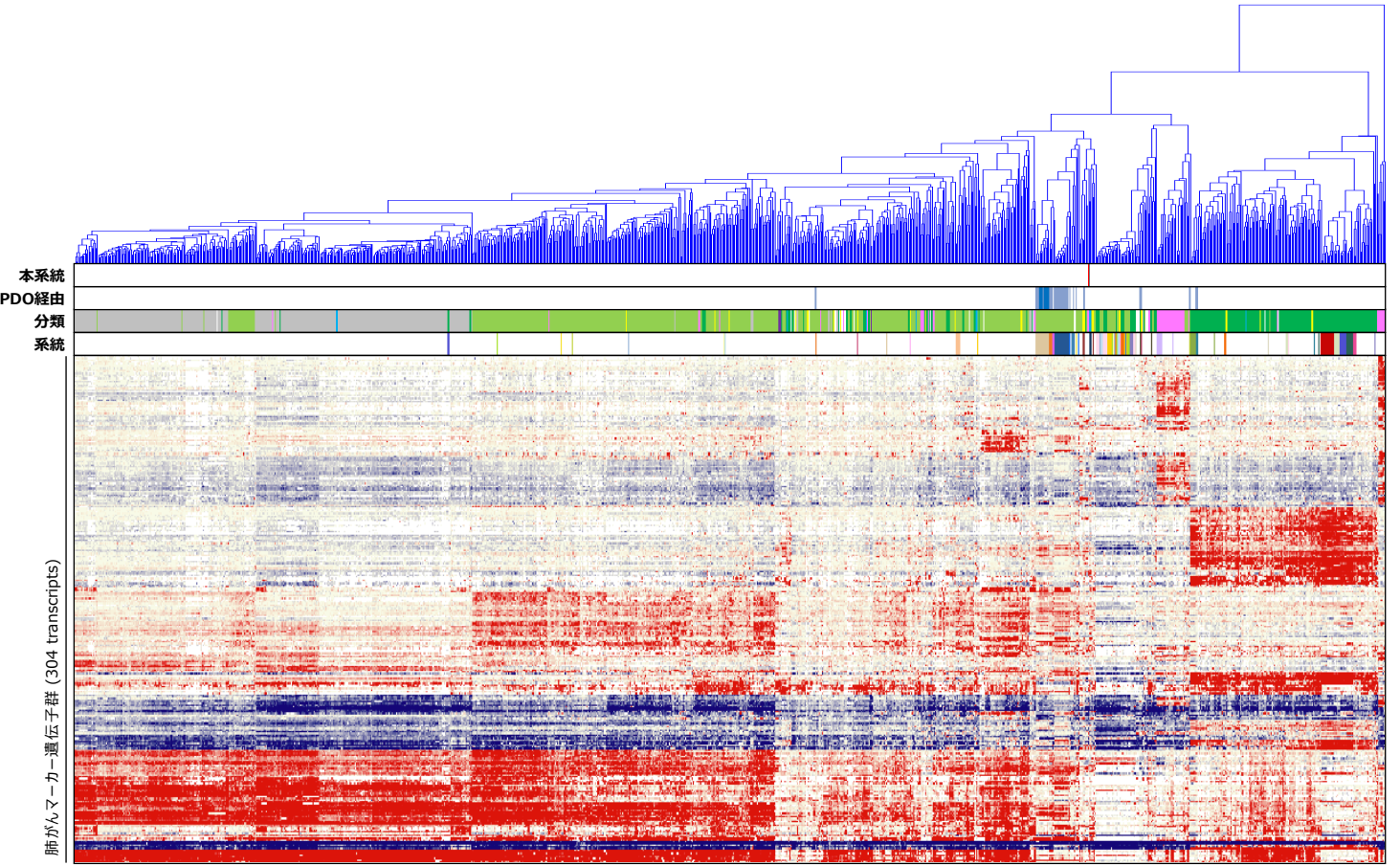
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN015 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN015 DLUN015 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     | *   |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   | ♣   | ♣   |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     | ♣   | ♣   |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    | ♣   | ♣   |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CND2         |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     | ♣   | ♣   |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
♣ Missense  
♣ Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000164

|                |                                             |                                                      |                          |         |   |  |
|----------------|---------------------------------------------|------------------------------------------------------|--------------------------|---------|---|--|
| 臨床情報シート区分      |                                             | 肺腫瘍                                                  |                          |         |   |  |
| 性 別            | 男                                           | 年 齢                                                  | 59 歳                     | 採 取 部 位 | 肺 |  |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span>                  |                                                      |                          |         |   |  |
|                | 病理診断名                                       |                                                      | 診断コード                    |         |   |  |
|                | がん肉腫                                        |                                                      | L2.6.4                   |         |   |  |
| 病 期 分 類        | 原発腫瘍 (T) T3                                 |                                                      |                          |         |   |  |
|                | 所属リンパ節 (N) N0                               |                                                      |                          |         |   |  |
|                | 遠隔転移 (M) M0                                 |                                                      |                          |         |   |  |
|                | ステージ II (IIB )                              |                                                      |                          |         |   |  |
|                | (第7版)                                       |                                                      |                          |         |   |  |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                 | ly1                                                  | 胸腔内洗浄液細胞診 CLASS I 異型細胞なし |         |   |  |
|                | 血管浸潤 (v)                                    | v3                                                   | 気管支断端 (br) 陰性(-)         |         |   |  |
|                | 胸膜浸潤 (pl)                                   | pl0                                                  | 肺動脈断端 (pa) 陰性(-)         |         |   |  |
|                | 肺内転移 (pm)                                   | pm0                                                  | 肺静脈断端 (pv) 陰性(-)         |         |   |  |
|                | 胸水細胞診 (E)                                   | 陰性(-)                                                |                          |         |   |  |
|                |                                             |                                                      |                          |         |   |  |
| 免疫組織学的<br>検 査  | AE1/AE3                                     | 一部陽性                                                 | Calretinin               | 陰性(-)   |   |  |
|                | EMA                                         | 陽性(+)                                                | CD8                      | 陰性(-)   |   |  |
|                | CEA                                         | 一部陽性                                                 | Desmin                   | 陰性(-)   |   |  |
|                | CD56                                        | 陽性(+)                                                | SMA                      | 陰性(-)   |   |  |
|                | Vimentin                                    | 陽性(+)                                                | Myogenin                 | 陰性(-)   |   |  |
|                | MIB-1                                       | 70 %                                                 | WT-1                     | 陰性(-)   |   |  |
|                | p53                                         | 70 %                                                 | D2-40                    | 陰性(-)   |   |  |
|                | S100                                        | 一部陽性                                                 | TTF-1                    | 陰性(-)   |   |  |
|                | SALL4                                       | 一部陽性                                                 | CD5                      | 陰性(-)   |   |  |
|                | OCT3/4                                      | 一部陽性                                                 | CD30                     | 陰性(-)   |   |  |
|                | 陰性:c-kit, βHCG, pALP, synaptophysin, AFP    |                                                      |                          |         |   |  |
|                | alcian青+PAS染色にて、青で染まる軟骨基質、赤に染まる骨基質などが観察される。 |                                                      |                          |         |   |  |
|                | 既 往 歴                                       | 糖尿病, 脂質異常症, 盲腸がん, 関節リウマチ(メトトレキサート投与), 多中心性Castleman病 |                          |         |   |  |
|                | 放射線療法歴                                      |                                                      |                          |         |   |  |
| 薬剤治療歴          | カベシタピン(盲腸がん), メトトレキサート(関節リウマチ)              |                                                      |                          |         |   |  |
| 喫 煙 歴          | あり(過去)                                      |                                                      |                          |         |   |  |
| 飲 酒 歴          | あり(習慣性)                                     |                                                      |                          |         |   |  |
| 特 記 事 項        |                                             |                                                      |                          |         |   |  |



GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 17 日

増殖速度 21.6 mm<sup>3</sup>/day

病理組織所見 未分化がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺), F-PDO経由

性別 男性 年齢 63 歳

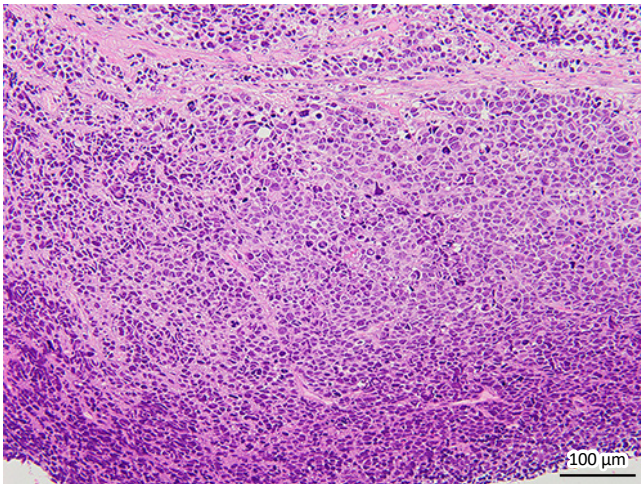
入手先 日本

病理組織所見 乳頭型腺がん

F-PDO系統 RLUN008-2 (F\_PDO\_000032)

## 病理組織像

## F-PDX®

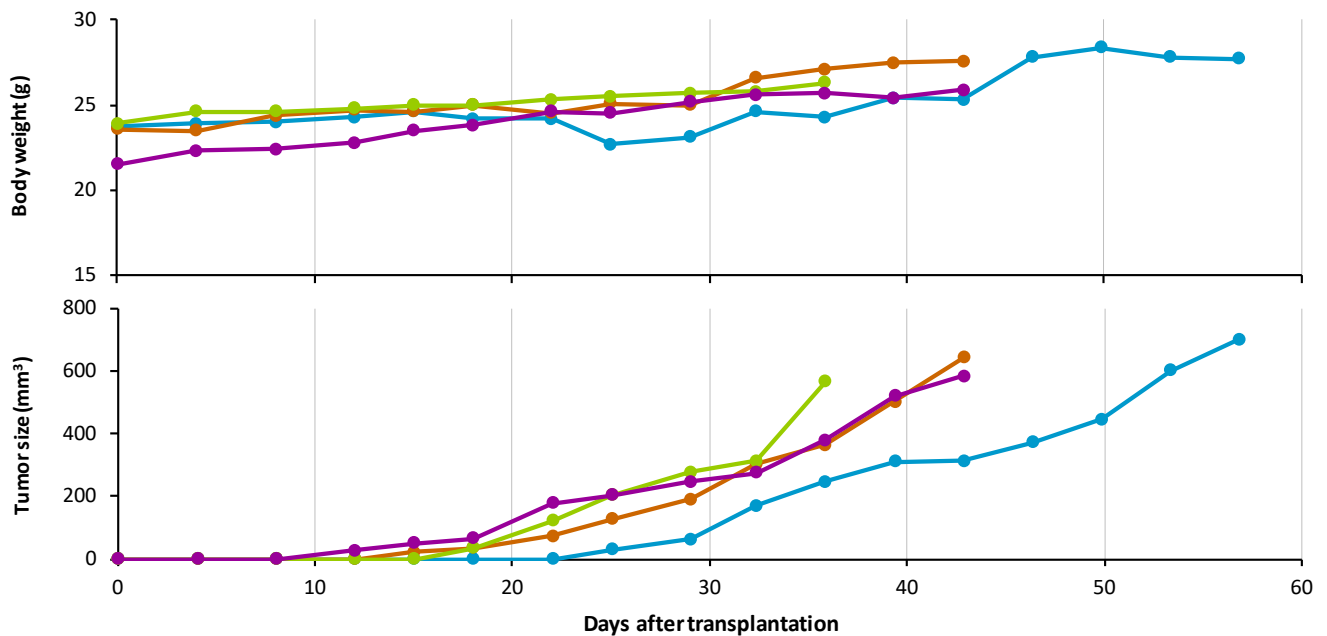


## 元腫瘍

No image available

## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



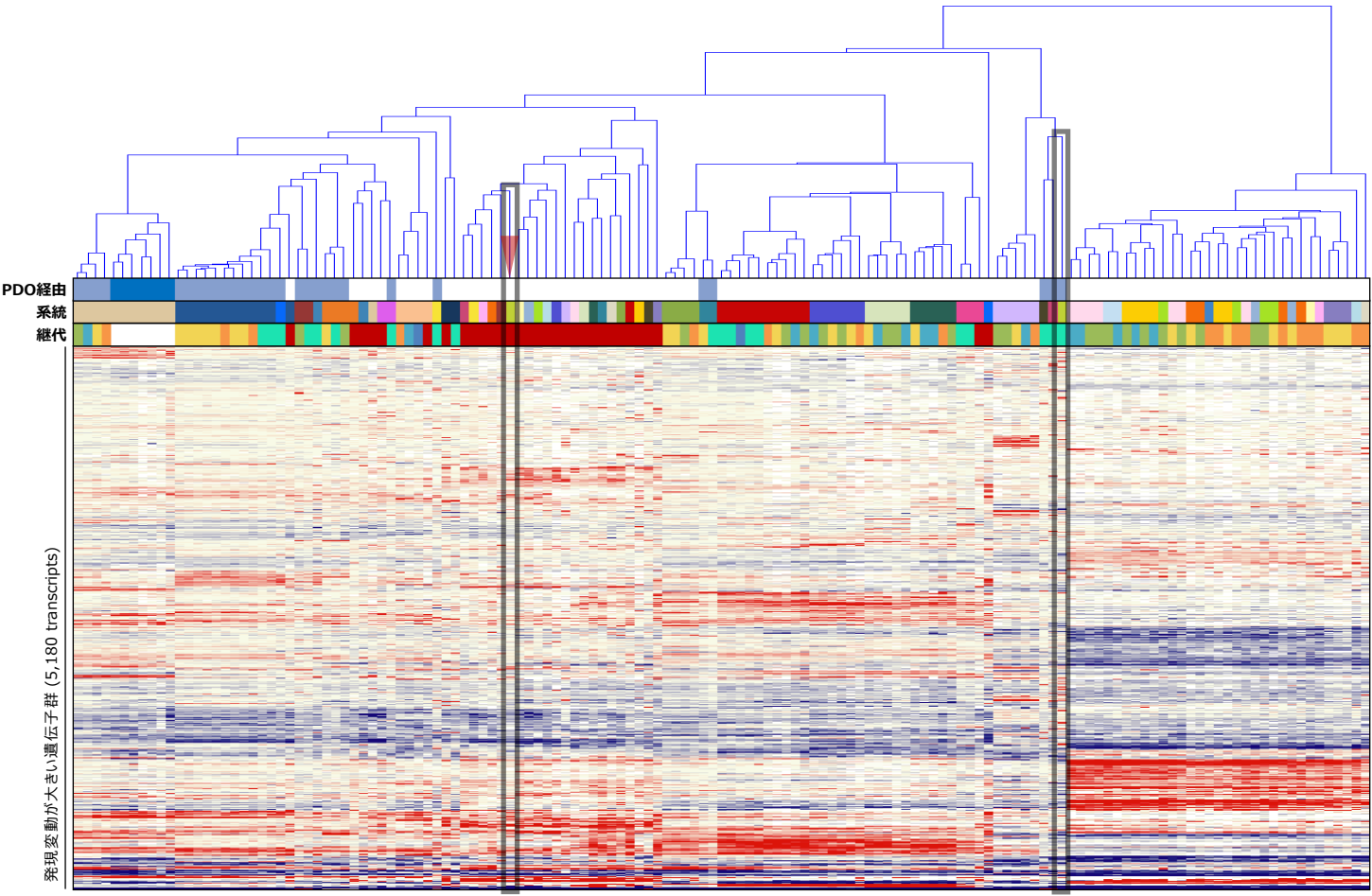
網羅的遺伝子発現解析 (クラスタ分析) による評価



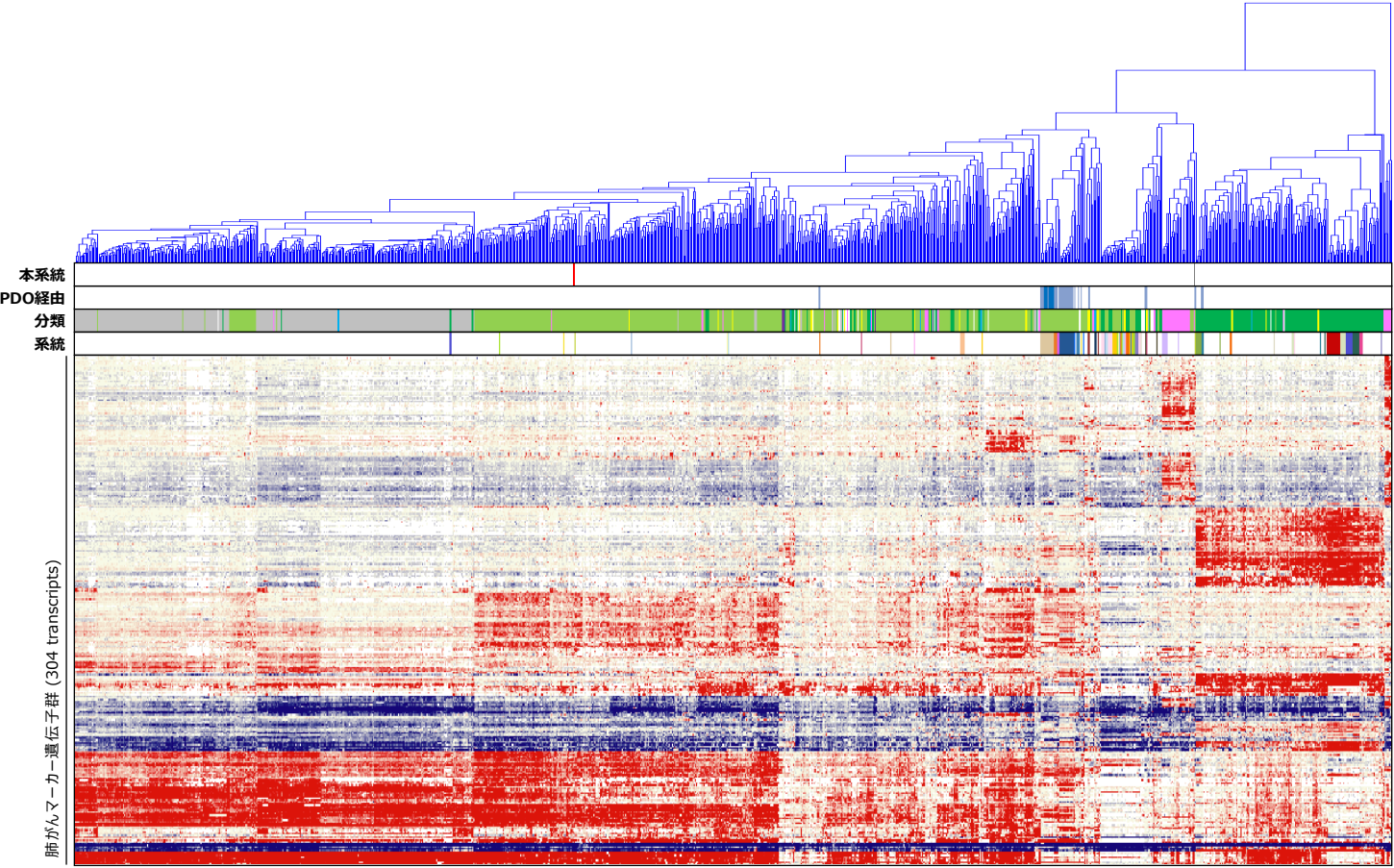
【系統】 元の腫瘍が同じサンプルを同一色で表示      【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植      ▼ DLUN016 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO      【本系統】 DLUN016 DLUN016 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     | *   | ♣   |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
♣ Missense  
♠ Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0



臨床情報

F\_PDX\_000211

|                |                                                   |         |          |         |   |
|----------------|---------------------------------------------------|---------|----------|---------|---|
| 臨床情報シート区分      |                                                   | 肺腫瘍     |          |         |   |
| 性 別            | 男                                                 | 年 齢     | 63 歳     | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span style="color: orange;">L</span> |         |          |         |   |
|                | 病理診断名                                             |         | 診断コード    |         |   |
|                | 乳頭型腺がん                                            |         | L2.1.03  |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                                          | T3      |          |         |   |
|                | 所属リンパ節 (N)                                        | N2      |          |         |   |
|                | 遠隔転移 (M)                                          | M0      |          |         |   |
|                | ステージ                                              | III     | ( IIIA ) |         |   |
|                | 分化度 (G)                                           | G2      |          |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                       | ly1     |          |         |   |
|                | 血管浸潤 (v)                                          | v1      |          |         |   |
|                | 胸膜浸潤 (pl)                                         | pl1     |          |         |   |
|                | 胸水/胸腔洗浄液                                          | CLASS I | 悪性細胞なし   |         |   |
|                | 気管支断端 (br)                                        | 陰性(-)   |          |         |   |
| 免疫組織学的<br>検 査  |                                                   |         |          |         |   |
| 既 往 歴          | 後頭蓋cyst                                           |         |          |         |   |
| 放射線療法歴         |                                                   |         |          |         |   |
| 薬剤治療歴          | ゲフィチニブ                                            |         |          |         |   |
| 喫 煙 歴          | なし                                                |         |          |         |   |
| 飲 酒 歴          | あり (過去)                                           |         |          |         |   |
| 特 記 事 項        |                                                   |         |          |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 15 日

増殖速度 29.9 mm<sup>3</sup>/day

病理組織所見 低分化腺がんまたは未分化がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺), F-PDO経由

性別 男性

年齢 65 歳

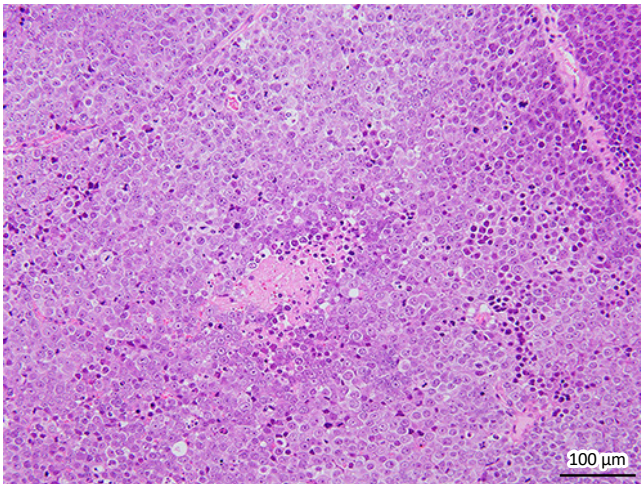
入手先 日本

病理組織所見 腺扁平上皮がん; 充実型腺がん

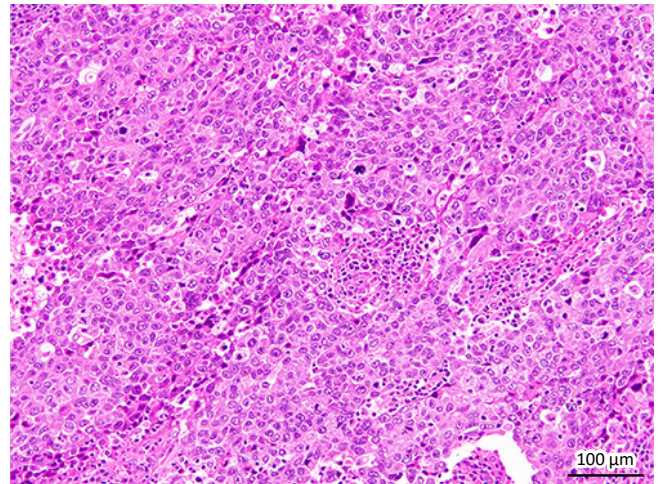
F-PDO系統 RLUN005-2 (F\_PDO\_000027)

## 病理組織像

## F-PDX®

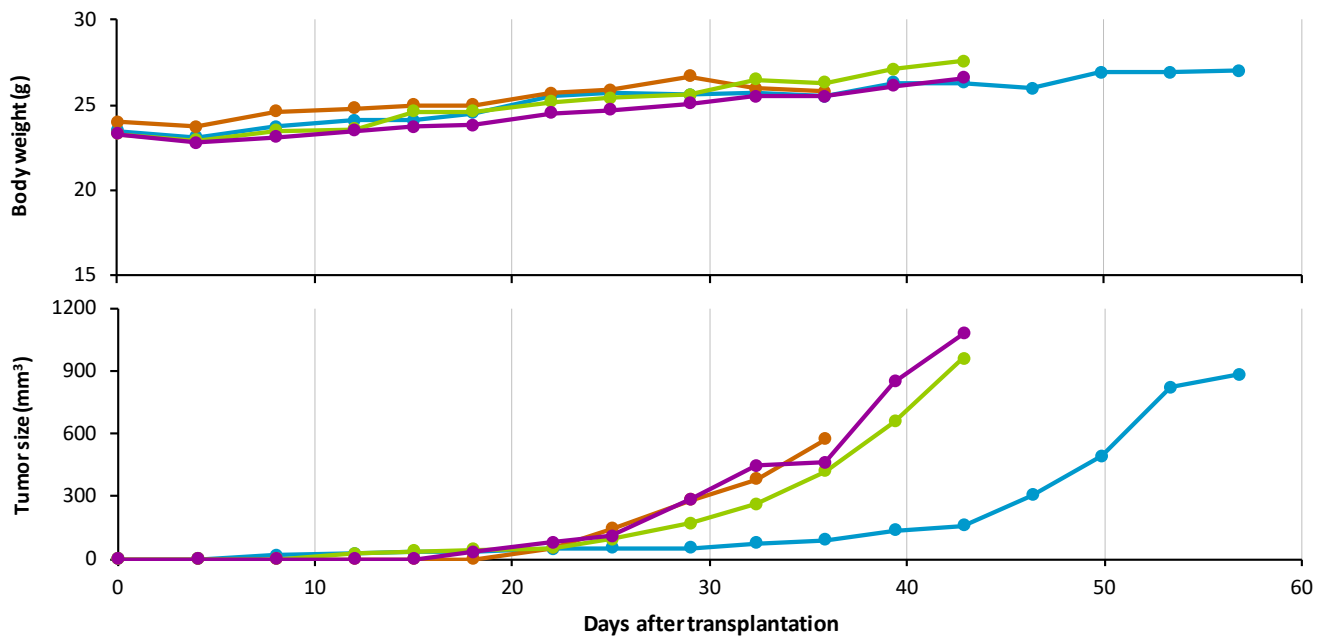


## 元腫瘍



## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



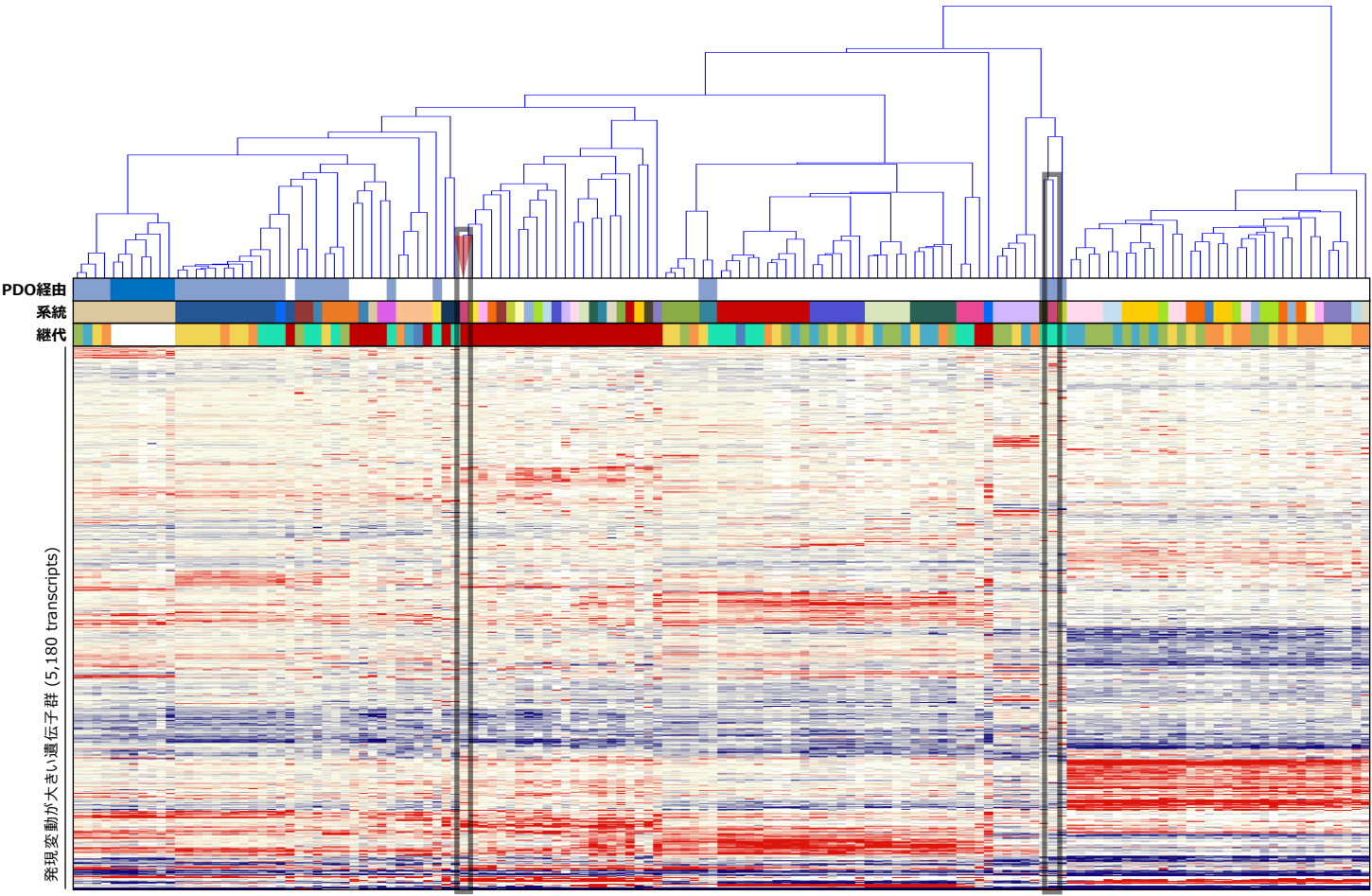
網羅的遺伝子発現解析 (クラスタ分析) による評価



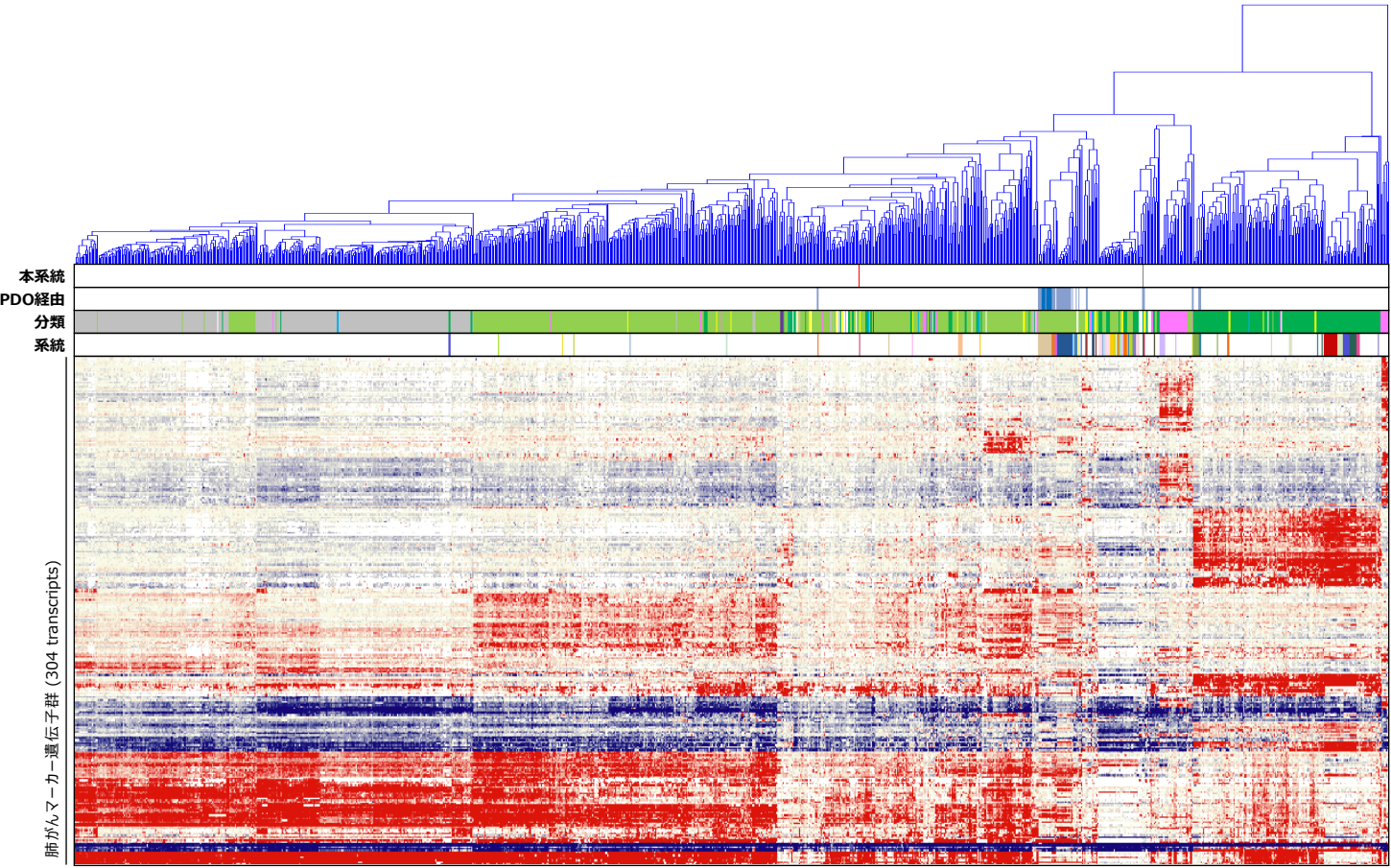
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN017 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN017 DLUN017 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)



がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |         |  |  |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|---------|--|--|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |         |  |  |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     | SLC22A2 |  |  |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     | SLC31A1 |  |  |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     | SLC34A2 |  |  |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     | SLC45A3 |  |  |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     | SLCO1B1 |  |  |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     | SLIT2   |  |  |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     | SMAD2   |  |  |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     | SMO     |  |  |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     | SOC51   |  |  |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     | SOS1    |  |  |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     | SOX9    |  |  |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     | SOX10   |  |  |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     | SOX11   |  |  |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     | SPRED1  |  |  |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     | SPTA1   |  |  |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     | SRC     |  |  |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     | STAG2   |  |  |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     | STAT1   |  |  |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     | STAT3   |  |  |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     | STAT4   |  |  |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     | STK36   |  |  |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     | SUFU    |  |  |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     | SYK     |  |  |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     | TAF1    |  |  |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     | TAL1    |  |  |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     | TBX22   |  |  |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     | TCF3    |  |  |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     | TCF7L1  |  |  |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     | TCF7L2  |  |  |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     | TCL1A   |  |  |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBKB    |     |     | MYH11    |     |     | RAD51   |     |     | TENT5C  |  |  |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     | TERT    |  |  |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     | TET1    |  |  |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     | TFRC    |  |  |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     | TGFBR2  |  |  |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     | TGM7    |  |  |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     | THBS1   |  |  |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     | TIMP3   |  |  |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     | TLX1    |  |  |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     | TMPRSS2 |  |  |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     | TNFAIP3 |  |  |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     | TNK2    |  |  |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     | TOP1    |  |  |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     | TOP2A   |  |  |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     | TP63    |  |  |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     | TP73    |  |  |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     | TPMT    |  |  |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     | TRAF7   |  |  |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     | TRIM24  |  |  |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     | TSC2    |  |  |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     | TSHR    |  |  |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     | TYK2    |  |  |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     | TYMS    |  |  |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     | UBR5    |  |  |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     | UGT1A1  |  |  |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     | VEGFA   |  |  |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     | VKORC1  |  |  |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     | WAS     |  |  |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     | WISP3   |  |  |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     | XPC     |  |  |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     | XRCC2   |  |  |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     | YES1    |  |  |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     | ZBTB2   |  |  |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     | ZNF217  |  |  |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     | ZNF384  |  |  |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     | ZNF521  |  |  |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     | ZNF703  |  |  |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |         |  |  |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |         |  |  |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |         |  |  |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |         |  |  |

【SNV検出】

◆ Missense

◆ Inframe Indel

▼ Stop Loss

◆ Frameshift Indel

♥ Nonsense

● Other

★ Fusion

✚ ITD

✳ Multiple

【遺伝子発現プロファイル】

低 ← 遺伝子発現レベル → 高

Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000212

|                |               |         |             |         |   |
|----------------|---------------|---------|-------------|---------|---|
| 臨床情報シート区分      |               | 肺腫瘍     |             |         |   |
| 性 別            | 男             | 年 齢     | 65 歳        | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 L |         |             |         |   |
|                | 病理診断名         |         | 診断コード       |         |   |
|                | 腺扁平上皮がん       |         | L2.3        |         |   |
|                | 充実型腺がん        |         | L2.1.05     |         |   |
| 病 期 分 類        | 原発腫瘍 (T)      | T1      | (T1a )      |         |   |
|                | 所属リンパ節 (N)    | N0      |             |         |   |
|                | 遠隔転移 (M)      | M0      |             |         |   |
|                | ステージ          | I       | (IA )       |         |   |
|                | 分化度 (G)       | G3      |             |         |   |
| (第7版の規約による)    |               |         |             |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)   | ly0     |             |         |   |
|                | 血管浸潤 (v)      | v0      |             |         |   |
|                | 胸膜浸潤 (pl)     | pl0     |             |         |   |
|                | 気管支断端 (br)    | 陰性(-)   |             |         |   |
|                | 胸水/胸腔洗浄液      | CLASS I | 異型細胞なし      |         |   |
| 免疫組織学的<br>検 査  | CK7           | 陽性(+)   | Alcian blue | 陽性領域    |   |
|                | CK20          | 一部陽性    | Alcian blue | 陽性領域    |   |
|                | p63           | 陰性(-)   | Alcian blue | 陽性領域    |   |
|                | CK5/6         | 陰性(-)   | Alcian blue | 陽性領域    |   |
|                | TTF-1         | 陰性(-)   | Alcian blue | 陽性領域    |   |
|                | CK7           | 陽性(+)   | 角化がみられる領域   |         |   |
|                | CK20          | 陰性(-)   | 角化がみられる領域   |         |   |
|                | p63           | 陽性(+)   | 角化がみられる領域   |         |   |
|                | CK5/6         | 陽性(+)   | 角化がみられる領域   |         |   |
|                | TTF-1         | 陰性(-)   | 角化がみられる領域   |         |   |
| 既 往 歴          | 高血圧, 大腸ポリープ   |         |             |         |   |
| 放射線療法歴         |               |         |             |         |   |
| 薬剤治療歴          |               |         |             |         |   |
| 喫 煙 歴          | あり (現役)       |         |             |         |   |
| 飲 酒 歴          |               |         |             |         |   |
| 特 記 事 項        |               |         |             |         |   |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 12 日

増殖速度 2.6 mm<sup>3</sup>/day

病理組織所見 腺がん

培養細胞化

## 移植サンプル

採取部位 原発巣 (肺), F-PDO経由

性別 男性 年齢 53 歳

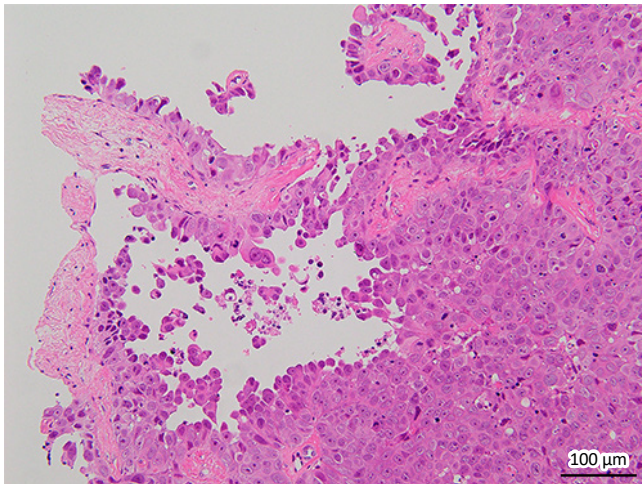
入手先 日本

病理組織所見 腺がん

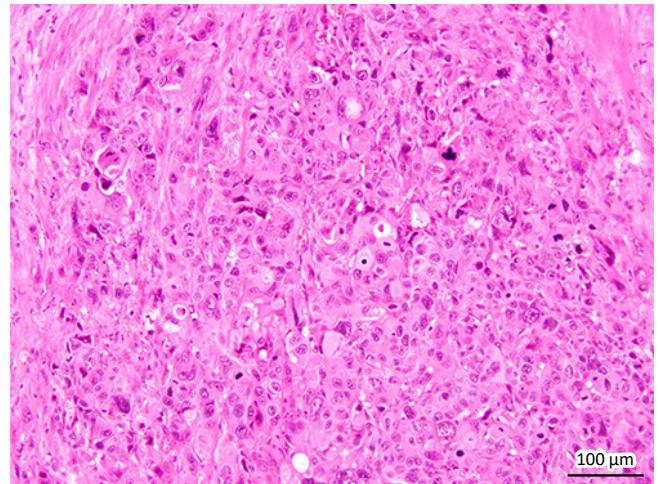
F-PDO系統 RLUN017-2 (F\_PDO\_000088)

## 病理組織像

## F-PDX®

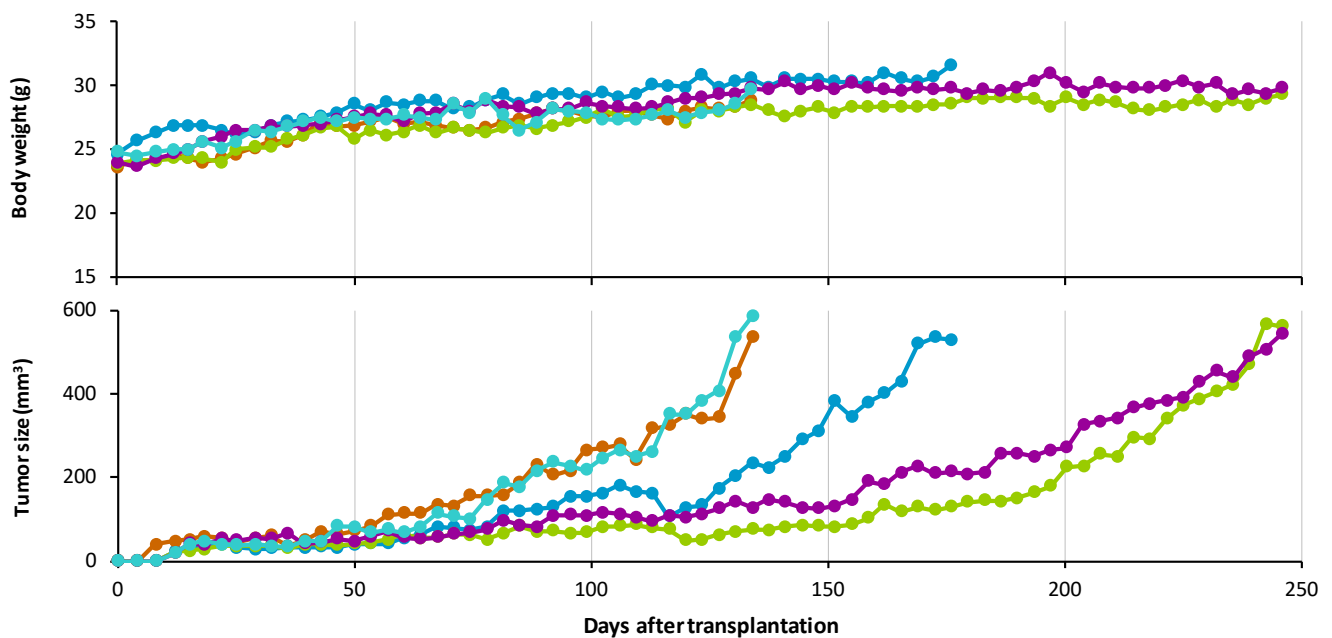


## 元腫瘍



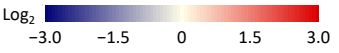
## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ





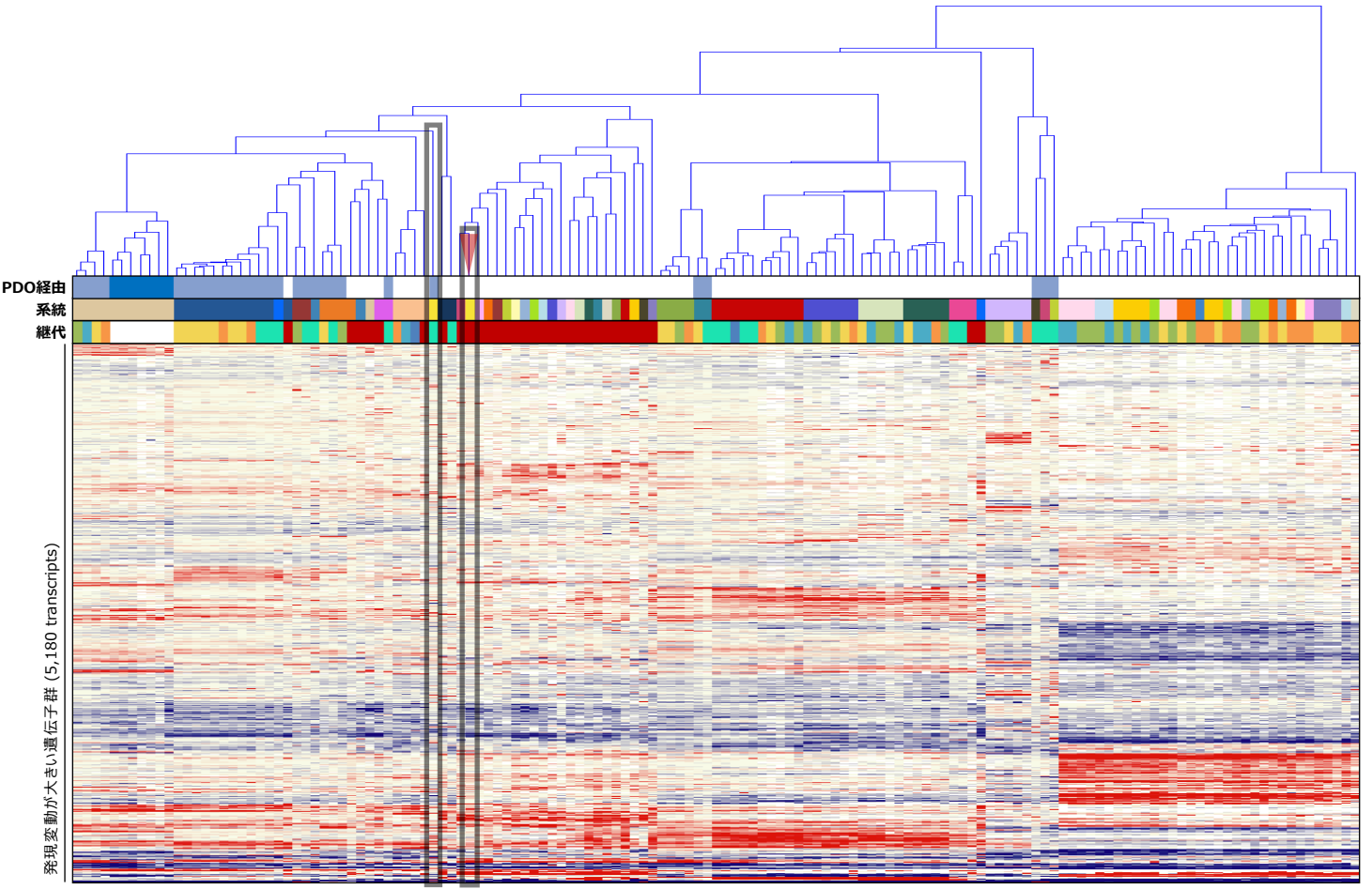
網羅的遺伝子発現解析 (クラスタ分析) による評価



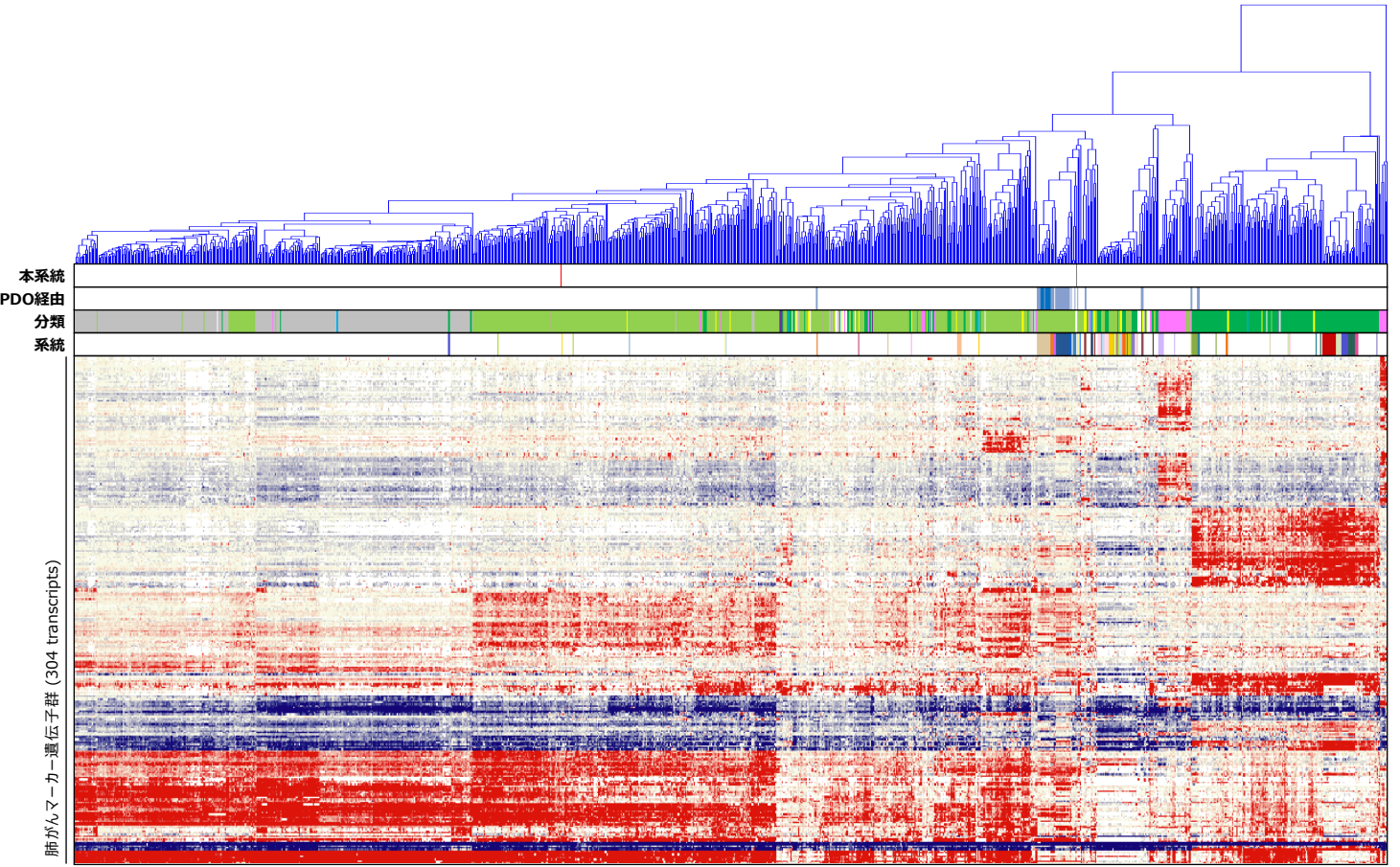
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN018 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN018 DLUN018 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     | ◆   |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     | ◆   |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       | ◆   |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     | ♥   |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     | ◆   |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     | ♥   |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     | ◆   |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     | ◆   |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】 ◆ Missense ◆ Inframe Indel ▼ Stop Loss  
◆ Frameshift Indel ♥ Nonsense ● Other  
★ Fusion + ITD \* Multiple

【遺伝子発現プロファイル】 低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000213

|                |                                                   |                |                  |         |   |
|----------------|---------------------------------------------------|----------------|------------------|---------|---|
| 臨床情報シート区分      |                                                   | 肺腫瘍            |                  |         |   |
| 性 別            | 男                                                 | 年 齢            | 53 歳             | 採 取 部 位 | 肺 |
| 診 断 名          | 臓器分類: 肺、気管支 <span style="color: orange;">L</span> |                |                  |         |   |
|                | 病理診断名                                             |                | 診断コード            |         |   |
|                | 腺がん                                               |                | L2.1             |         |   |
| 病 期 分 類        | 原発腫瘍 (T)                                          | T3             |                  |         |   |
|                | 所属リンパ節 (N)                                        | N2             |                  |         |   |
|                | 遠隔転移 (M)                                          | M0             |                  |         |   |
|                | ステージ                                              | III            | ( IIIA )         |         |   |
|                | 分化度 (G)                                           | G3             |                  |         |   |
| 手 術・病 理<br>所 見 | リンパ管侵襲 (ly)                                       | ly1            | 肺動脈断端 (pa) 陰性(-) |         |   |
|                | 血管浸潤 (v)                                          | v1             |                  |         |   |
|                | 胸膜浸潤 (pl)                                         | pl3            |                  |         |   |
|                | 胸水/胸腔洗浄液                                          | CLASS V        | 腺癌細胞あり           |         |   |
|                | 気管支断端 (br)                                        | 陰性(-)          |                  |         |   |
| 免疫組織学的<br>検 査  | TTF-1                                             | 陽性(+) (気管支鏡検査) |                  |         |   |
|                | CK5/6                                             | 陰性(-) (気管支鏡検査) |                  |         |   |
|                | p63                                               | 陰性(-) (気管支鏡検査) |                  |         |   |
|                |                                                   |                |                  |         |   |
| 既 往 歴          | 肺気腫                                               |                |                  |         |   |
| 放射線療法歴         |                                                   |                |                  |         |   |
| 薬剤治療歴          |                                                   |                |                  |         |   |
| 喫 煙 歴          | あり (現役)                                           |                |                  |         |   |
| 飲 酒 歴          | あり (習慣性)                                          |                |                  |         |   |
| 特 記 事 項        |                                                   |                |                  |         |   |



GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 64 日

増殖速度 14.4 mm<sup>3</sup>/day

病理組織所見 腺がん

培養細胞化

## 移植サンプル

採取部位 転移巣 (胸水), 再発, F-PDO経由

性別 男性

年齢 74 歳

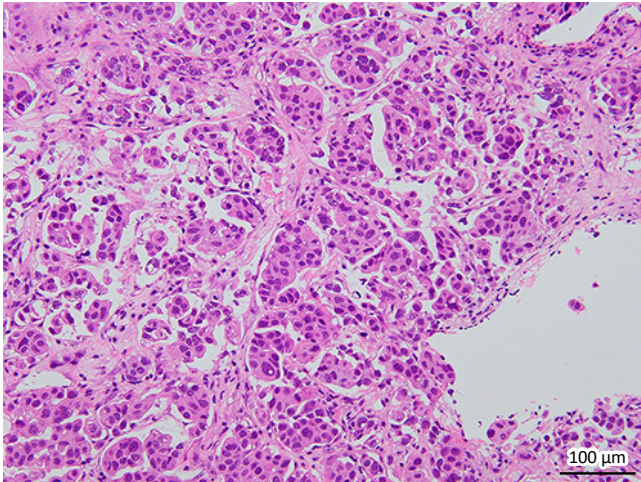
入手先 日本

病理組織所見 肺腫瘍の転移; 乳頭型腺がん;  
浸潤性粘液性腺がん

F-PDO系統 RLUN018-4 (F\_PDO\_000089)

## 病理組織像

## F-PDX®

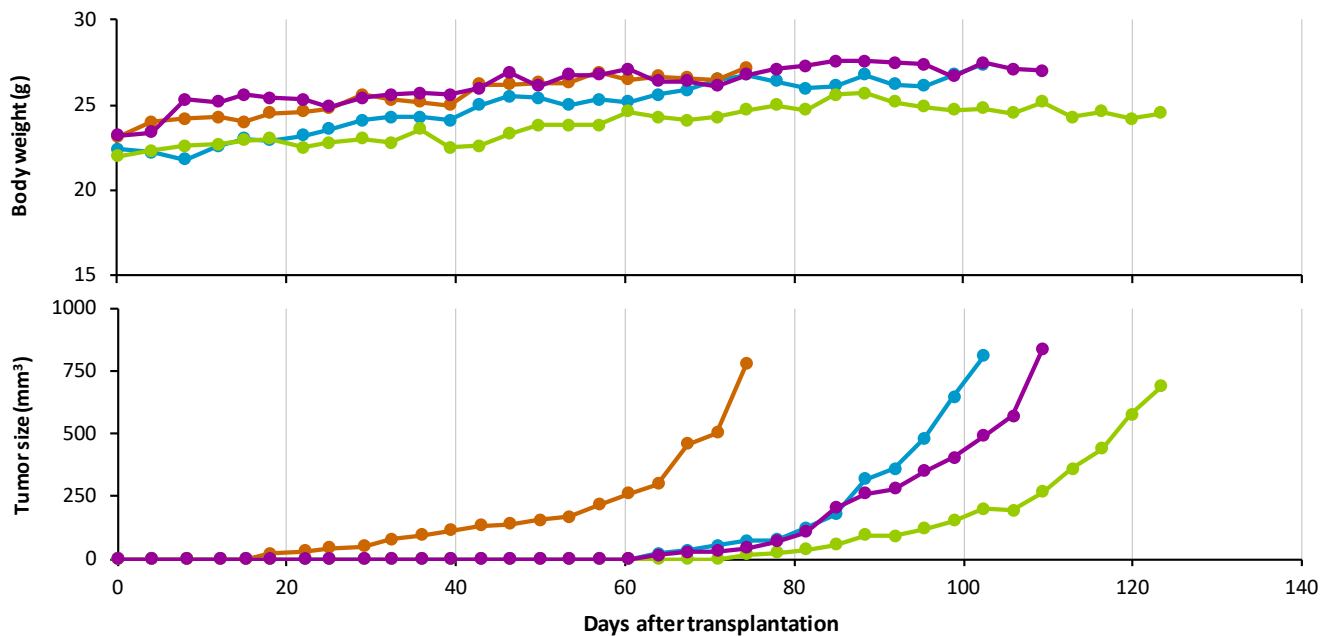


## 元腫瘍

No image available

## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ



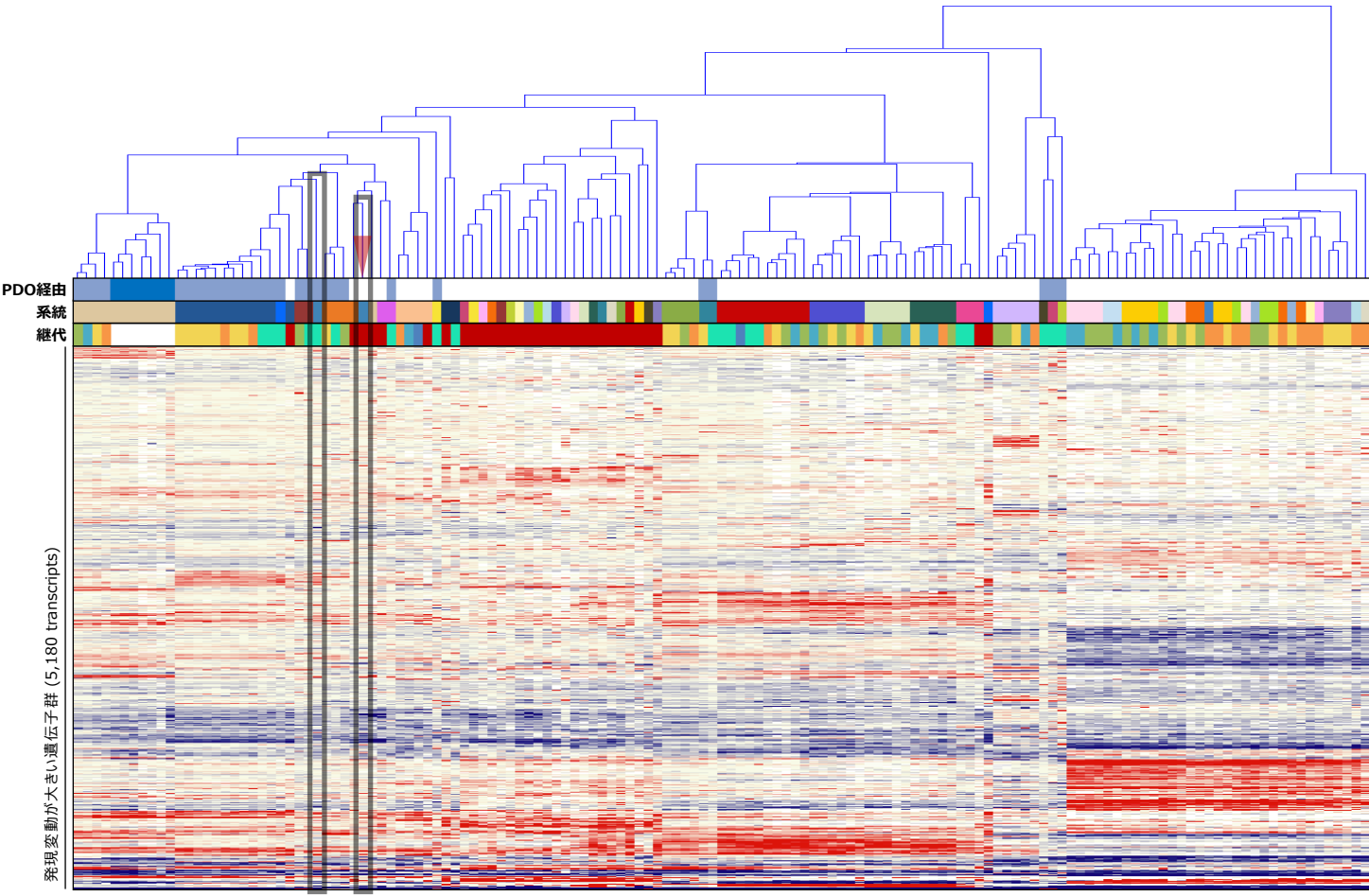
網羅的遺伝子発現解析 (クラスタ分析) による評価



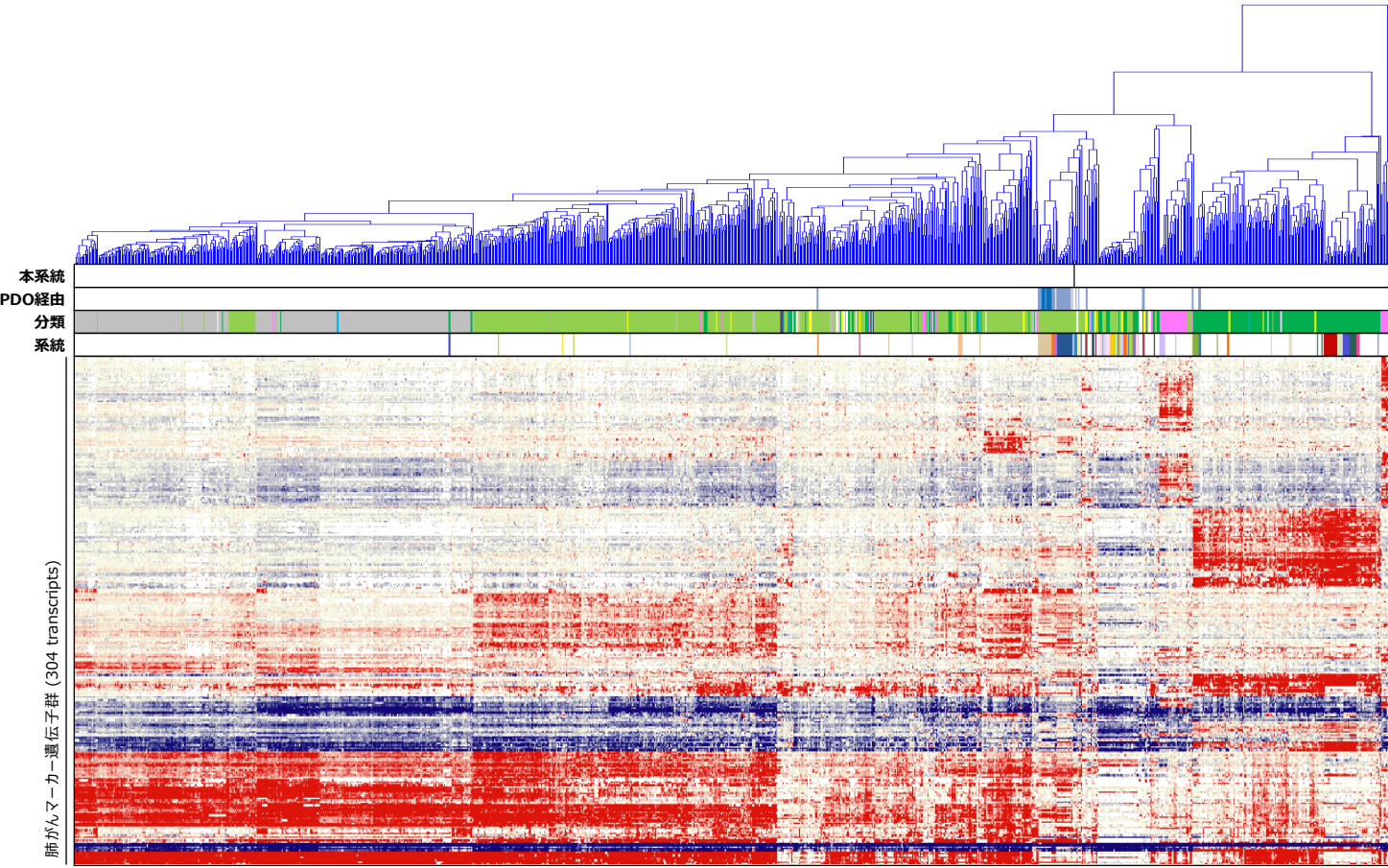
【系統】 元の腫瘍が同じサンプルを同一色で表示    【継代】 P0 P1 P2 P3 P4 P5 P6 多数匹同時移植    ▼ DLUN019 の元の腫瘍サンプル

【分類】 正常肺 腺がん 扁平上皮がん 腺扁平上皮がん 大細胞がん 神経内分泌腫瘍 肉腫様がん ※ 臨床情報に基づく分類

【PDO経由】 F-PDOを移植・継代したF-PDXサンプル PDO    【本系統】 DLUN019 DLUN019 の元の腫瘍サンプル



肺がん由来PDX系統および元の腫瘍サンプル (33 series, 141 samples)



肺がん由来サンプル (1,082 samples)

がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
◆ Inframe Indel  
▼ Stop Loss  
✦ Frameshift Indel  
♥ Nonsense  
● Other  
★ Fusion  
+ ITD  
✳ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0



臨床情報

F\_PDX\_000214

|                |                                |       |            |         |    |
|----------------|--------------------------------|-------|------------|---------|----|
| 臨床情報シート区分      |                                | 肺腫瘍   |            |         |    |
| 性 別            | 男                              | 年 齢   | 74 歳       | 採 取 部 位 | 胸水 |
| 診 断 名          | 臓器分類: 肺、気管支 <span>L</span>     |       |            |         |    |
|                | 病理診断名                          |       | 診断コード      |         |    |
|                | 肺腫瘍の転移                         |       | L6         |         |    |
|                | 乳頭型腺がん                         |       | L2.1.03    |         |    |
|                | 浸潤性粘液性腺がん                      |       | L2.1.06    |         |    |
| 病 期 分 類        | 原発腫瘍 (T)                       | T2    | (T2a )     | (原発)    |    |
|                | 所属リンパ節 (N)                     | N0    |            | (原発)    |    |
|                | 遠隔転移 (M)                       | M0    |            | (原発)    |    |
|                | ステージ                           | I     | (IB )      | (原発)    |    |
|                | 分化度 (G)                        | G2    |            | (原発)    |    |
| 手 術・病 理<br>所 見 | 胸水/胸腔洗浄液 CLASS V 異型細胞あり        |       |            |         |    |
| 免疫組織学的<br>検 査  | Alcian blue 染色                 | 一部陽性  | 胞体内の空胞     |         |    |
|                | ALK融合蛋白                        | 陰性(-) | (原発気管支鏡検査) |         |    |
| 既 往 歴          | 虫垂炎, 大腸ポリープ, 胃潰瘍, 胆石, 高血圧, 肺がん |       |            |         |    |
| 放射線療法歴         |                                |       |            |         |    |
| 薬剤治療歴          | テガフル, ウラシル                     |       |            |         |    |
| 喫 煙 歴          | あり (現役)                        |       |            |         |    |
| 飲 酒 歴          | あり (習慣性)                       |       |            |         |    |
| 特 記 事 項        |                                |       |            |         |    |

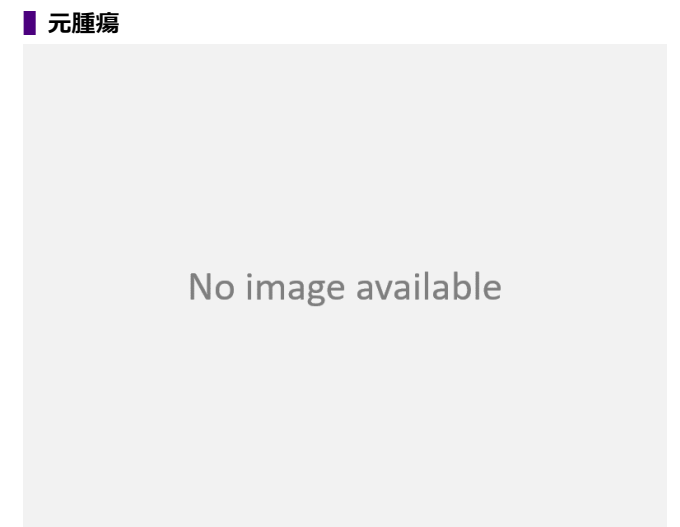
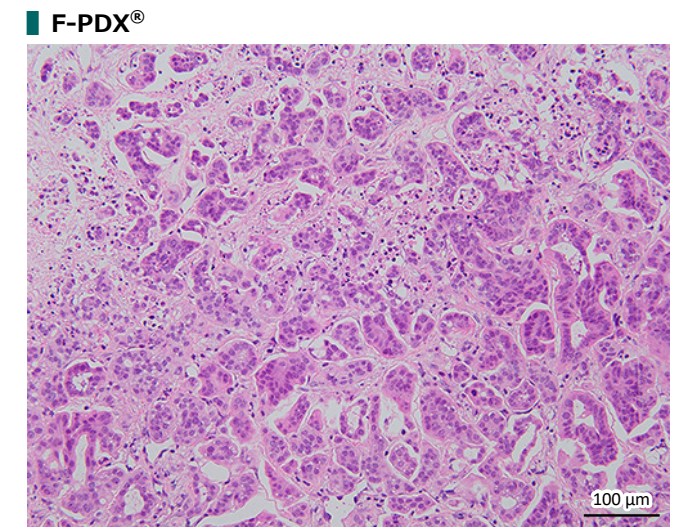
GEP SNV CNV HLA

基本属性

|        |             |      |    |
|--------|-------------|------|----|
| F-PDX® |             |      |    |
| 移植動物系統 | NOG         | 移植部位 | 皮下 |
| 生着日数   | 8 日         |      |    |
| 増殖速度   | 3.9 mm³/day |      |    |
| 病理組織所見 | コロイド腺がん     |      |    |
| 培養細胞化  |             |      |    |

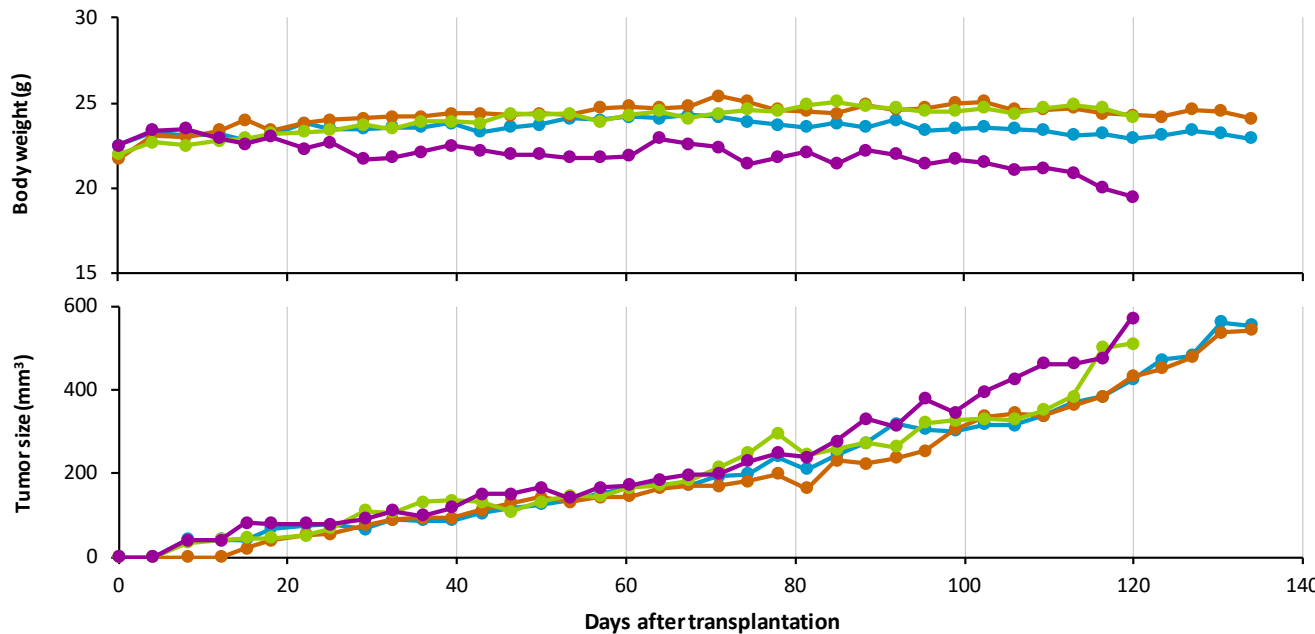
|         |                                 |    |      |
|---------|---------------------------------|----|------|
| 移植サンプル  |                                 |    |      |
| 採取部位    | 転移巣 (胸水 (CLASS V)), 再発, F-PDO経由 |    |      |
| 性別      | 女性                              | 年齢 | 68 歳 |
| 入手先     | 日本                              |    |      |
| 病理組織所見  | 肺腫瘍の転移; コロイド腺がん                 |    |      |
| F-PDO系統 | RLUN020 (F_PDO_000090)          |    |      |

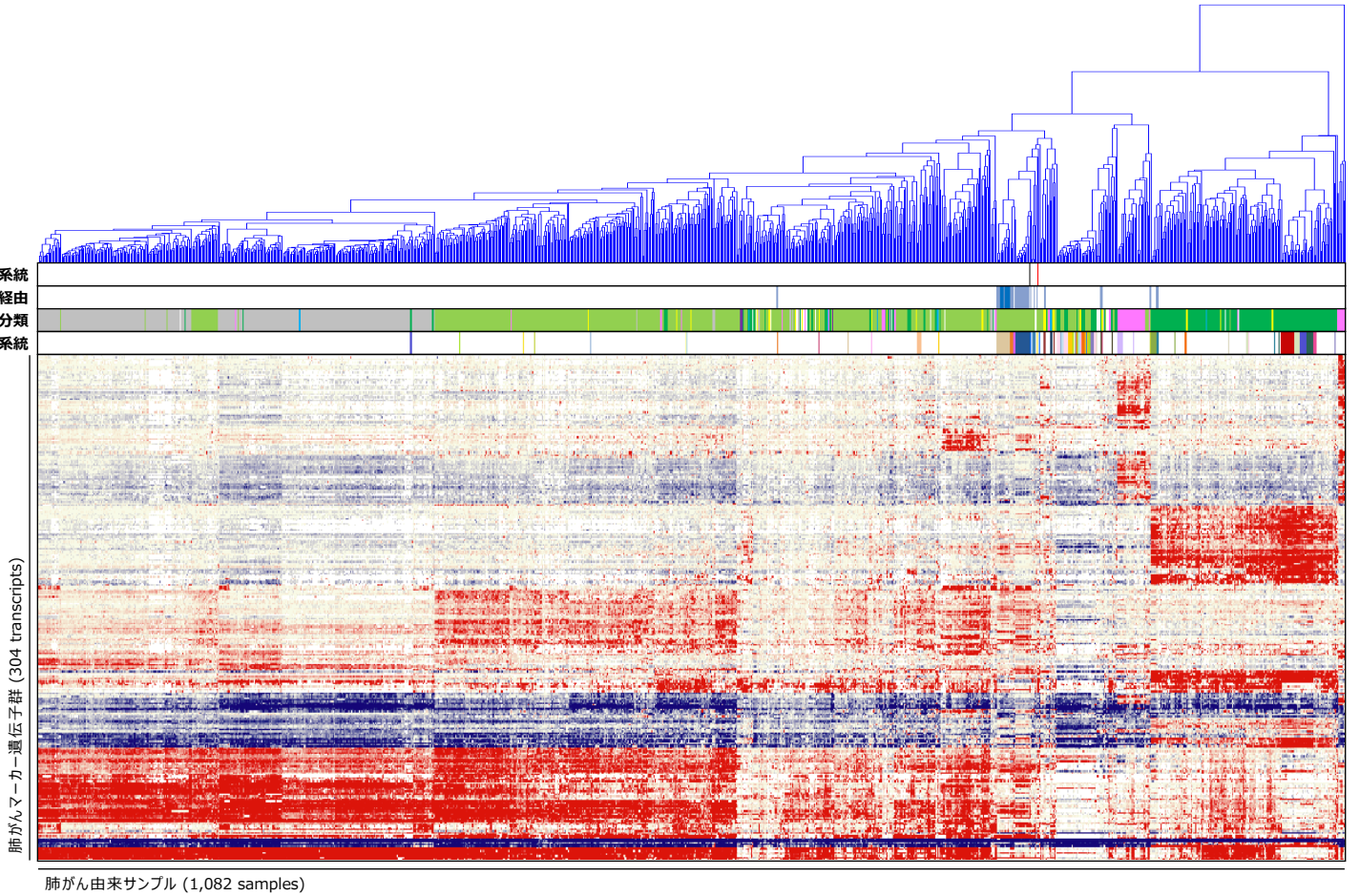
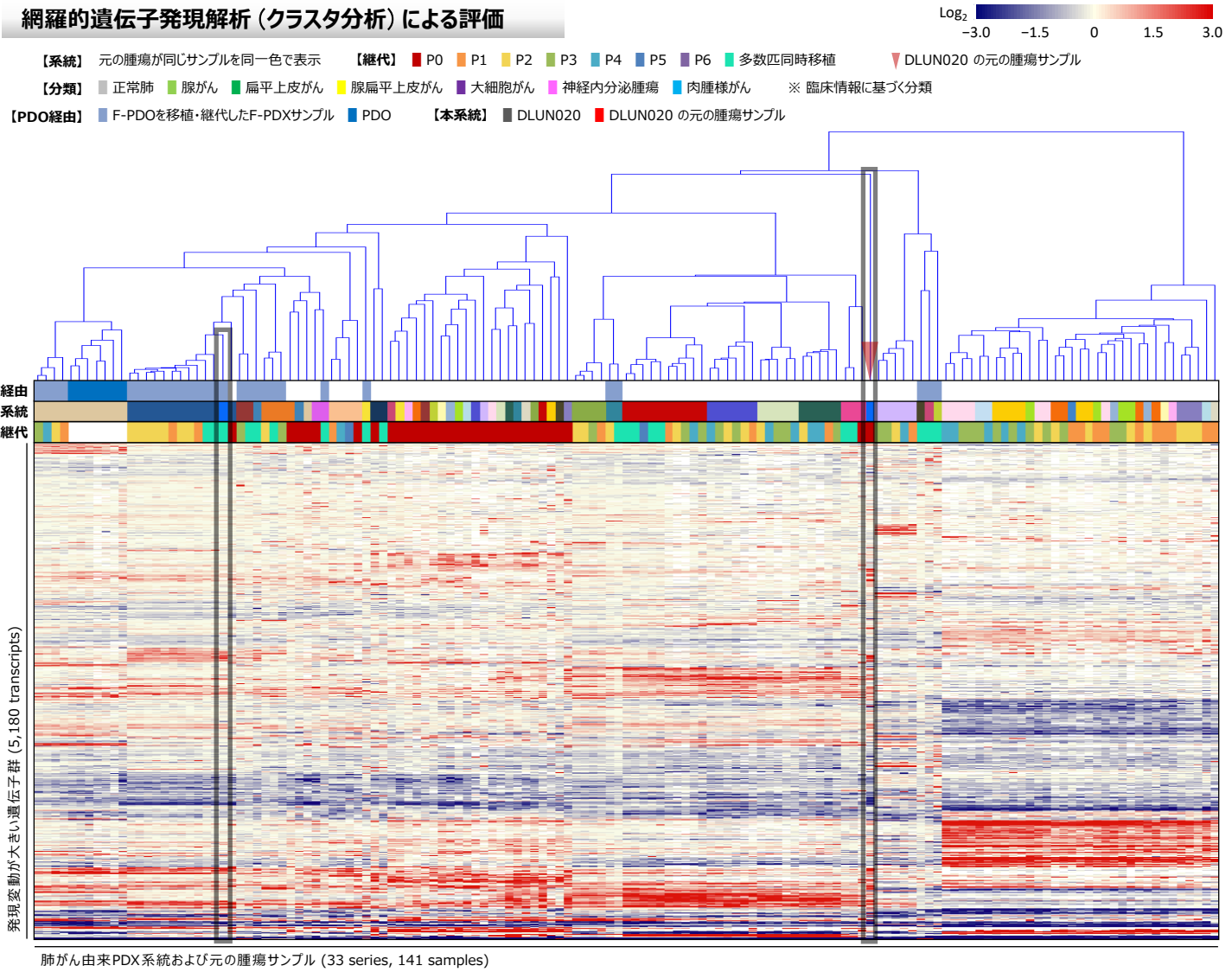
病理組織像



移植後の推移

上段: 体重 / 下段: 腫瘍サイズ







がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK8    |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NTRK1    |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBBF         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBD5    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXL2   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO1   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
\* Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000215

|               |                                                   |     |          |         |              |
|---------------|---------------------------------------------------|-----|----------|---------|--------------|
| 臨床情報シート区分     |                                                   | 肺腫瘍 |          |         |              |
| 性 別           | 女                                                 | 年 齢 | 68 歳     | 採 取 部 位 | 胸水 (CLASS V) |
| 診 断 名         | 臓器分類: 肺、気管支 <span style="color: orange;">L</span> |     |          |         |              |
|               | 病理診断名                                             |     | 診断コード    |         |              |
|               | 肺腫瘍の転移                                            |     | L6       |         |              |
|               | コロイド腺がん                                           |     | L2.1.08  |         |              |
| 病 期 分 類       | 原発腫瘍 (T)                                          | T2  | ( T2a )  | ( 原発 )  |              |
|               | 所属リンパ節 (N)                                        | N2  |          | ( 原発 )  |              |
|               | 遠隔転移 (M)                                          | M0  |          | ( 原発 )  |              |
|               | ステージ                                              | III | ( IIIA ) | ( 原発 )  |              |
| 手術・病理<br>所 見  |                                                   |     |          |         |              |
| 免疫組織学的<br>検 査 | ALK融合蛋白 陰性(-) ( 原発 )                              |     |          |         |              |
| 既 往 歴         | 肺がん                                               |     |          |         |              |
| 放射線療法歴        |                                                   |     |          |         |              |
| 薬剤治療歴         | カルボプラチン, テガフル, ギメラシル, オテラシルカリウム                   |     |          |         |              |
| 喫 煙 歴         | なし                                                |     |          |         |              |
| 飲 酒 歴         | なし                                                |     |          |         |              |
| 特 記 事 項       |                                                   |     |          |         |              |

GEP

SNV

CNV

HLA

## 基本属性

## F-PDX®

移植動物系統 NOG 移植部位 皮下

生着日数 22 日

増殖速度 5.4 mm<sup>3</sup>/day

病理組織所見 腺がん

培養細胞化

## 移植サンプル

採取部位 転移巣 (胸水), 再発, F-PDO経由

性別 男性

年齢 77 歳

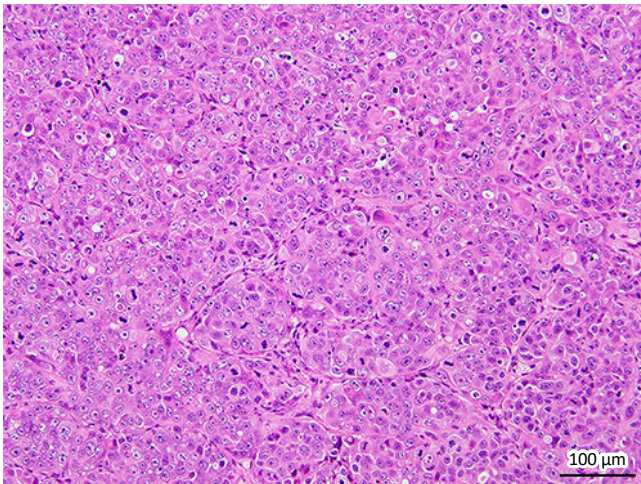
入手先 日本

病理組織所見 肺腫瘍の転移; 乳頭型腺がん; 置換型腺がん

F-PDO系統 RLUN014-2 (F\_PDO\_000083)

## 病理組織像

## F-PDX®

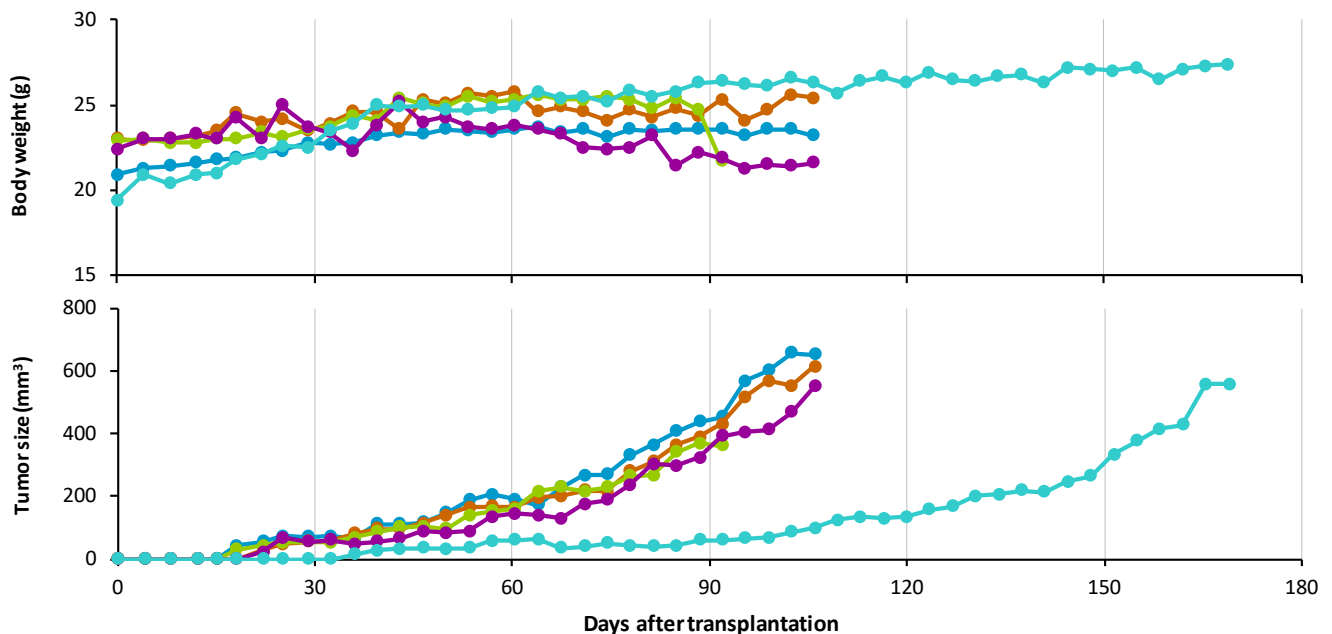


## 元腫瘍

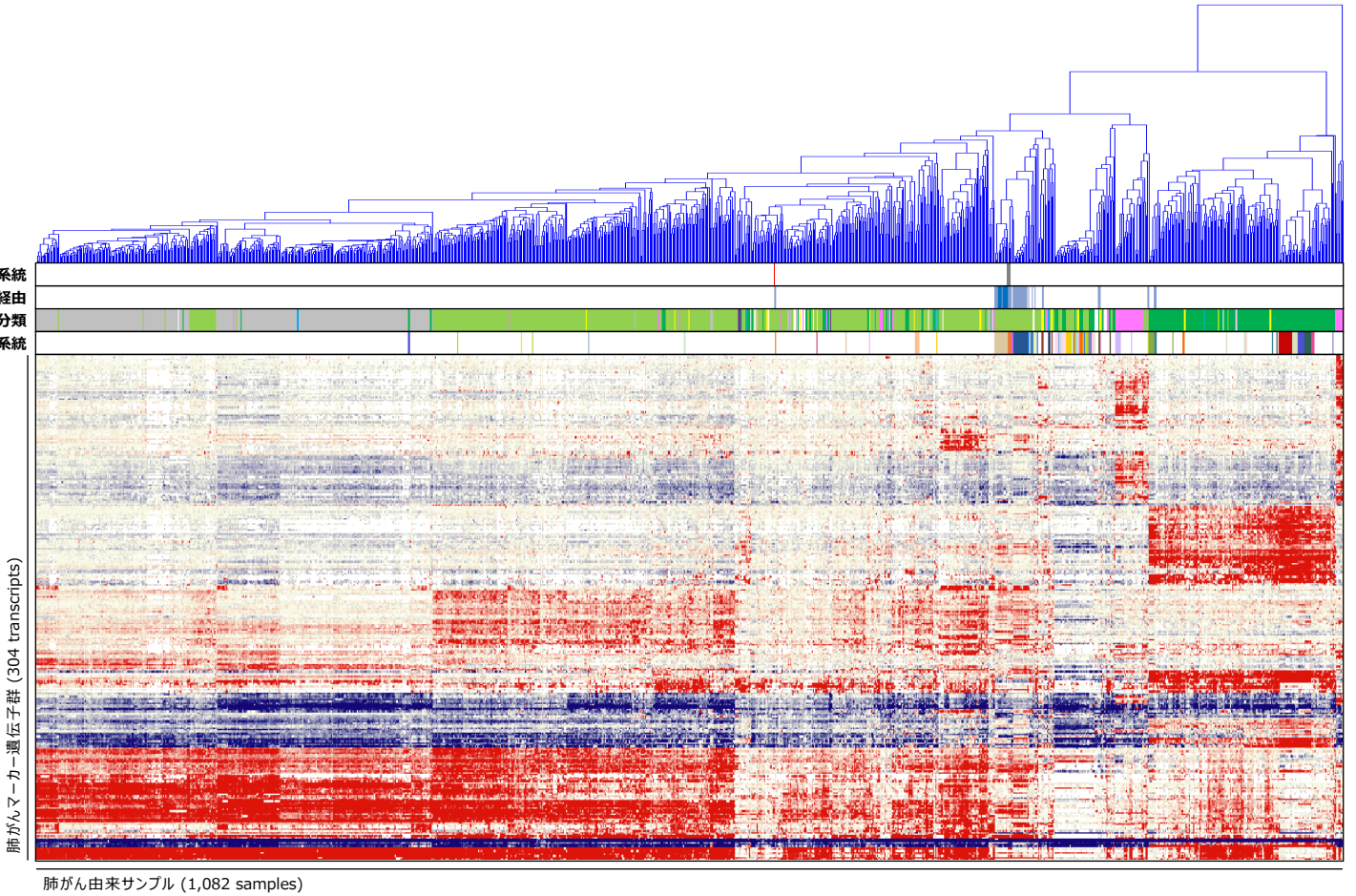
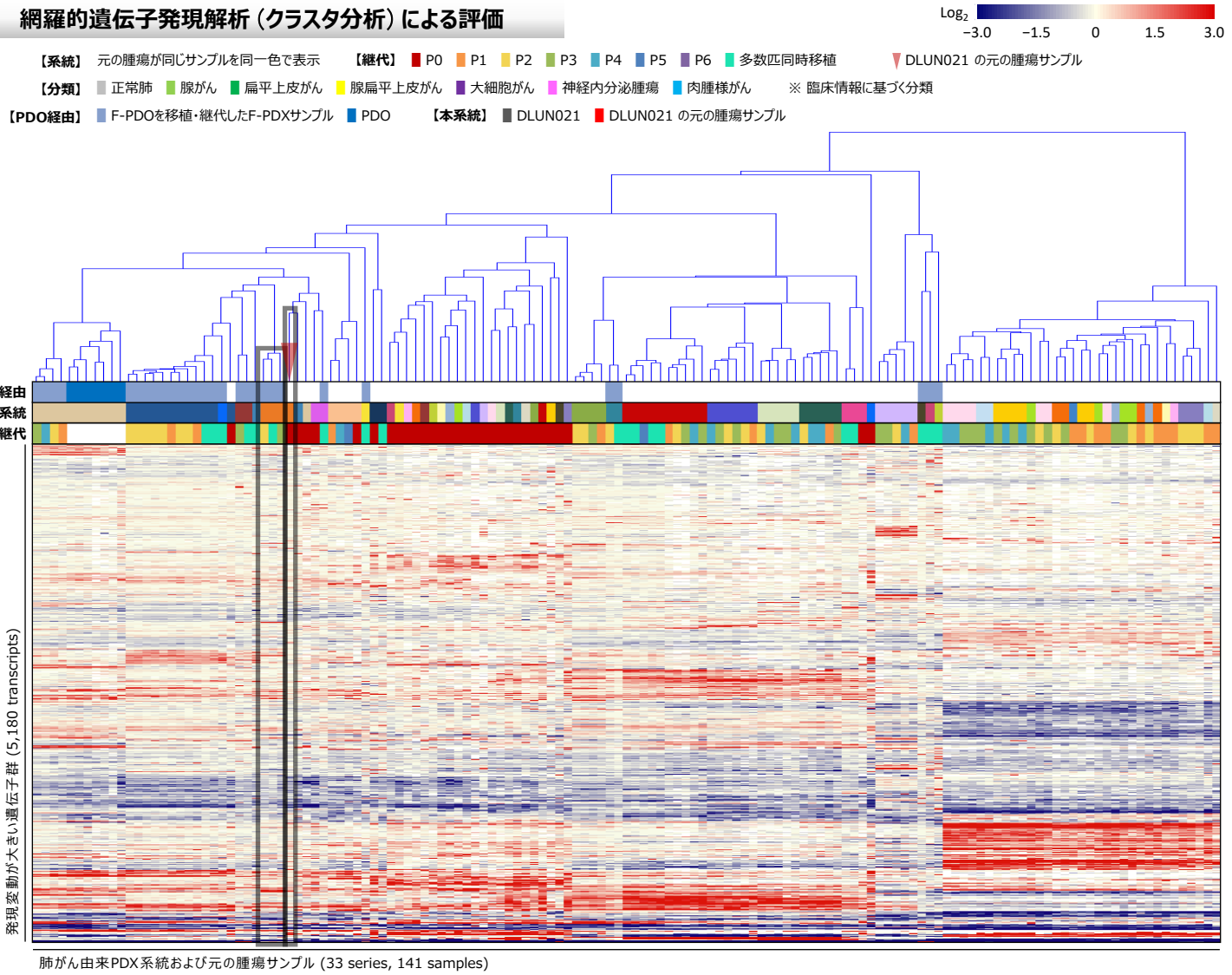
No image available

## 移植後の推移

上段: 体重 / 下段: 腫瘍サイズ







がん関連遺伝子の発現プロファイル

| Gene     | SNV |     | GEP |     | Gene         | GEP |     | Gene    | GEP |     | Gene     | GEP |     | Gene     | GEP |     | Gene    | GEP |     |
|----------|-----|-----|-----|-----|--------------|-----|-----|---------|-----|-----|----------|-----|-----|----------|-----|-----|---------|-----|-----|
|          | Pt. | PDX | Pt. | PDX |              | Pt. | PDX |         | Pt. | PDX |          | Pt. | PDX |          | Pt. | PDX |         | Pt. | PDX |
| AKT1     |     |     |     |     | ABCB1        |     |     | COL1A1  |     |     | G6PD     |     |     | MAGOH    |     |     | PIK3R5  |     |     |
| ALK      |     |     |     |     | ABCC2        |     |     | CRBN    |     |     | GABRA6   |     |     | MALT1    |     |     | PIM1    |     |     |
| AR       |     |     |     |     | ABL1         |     |     | CREB1   |     |     | GAPDH    |     |     | MAML2    |     |     | PLAG1   |     |     |
| ARID1A   |     |     |     |     | ABL2         |     |     | CRLF2   |     |     | GATA1    |     |     | MAP2K2   |     |     | PLCG1   |     |     |
| ATM      |     |     |     |     | ACTB         |     |     | CRTC1   |     |     | GATA2    |     |     | MAP3K1   |     |     | PLCG2   |     |     |
| BRCA1    |     |     |     |     | ACVR1B       |     |     | CSF1R   |     |     | GDNF     |     |     | MAP3K7   |     |     | PLEKHG5 |     |     |
| BRCA2    |     |     |     |     | ACVR2A       |     |     | CTNNA1  |     |     | GID4     |     |     | MAPK1    |     |     | PMS1    |     |     |
| CARD11   |     |     |     |     | ADGRA2       |     |     | CTSV    |     |     | GLI1     |     |     | MAPK8    |     |     | POLD1   |     |     |
| CCNE1    |     |     |     |     | ADGRB3       |     |     | CUL3    |     |     | GNA11    |     |     | MARK4    |     |     | POU5F1  |     |     |
| CDH1     |     |     |     |     | AFF1         |     |     | CYLD    |     |     | GNA13    |     |     | MAX      |     |     | PPARG   |     |     |
| CDK12    |     |     |     |     | AFF3         |     |     | CYP1A2  |     |     | GNAQ     |     |     | MBD1     |     |     | PREX2   |     |     |
| CEBPA    |     |     |     |     | AKT2         |     |     | CYP2C9  |     |     | GRB7     |     |     | MCL1     |     |     | PRKACA  |     |     |
| CREBBP   |     |     |     |     | AKT3         |     |     | CYP2D6  |     |     | GRIN2A   |     |     | MDM4     |     |     | PRKACB  |     |     |
| CTNNB1   |     |     |     |     | ARAF         |     |     | CYP19A1 |     |     | GRM3     |     |     | MED12    |     |     | PRKAR1A |     |     |
| EGFR     |     |     |     |     | ARFRP1       |     |     | DAXX    |     |     | GRM8     |     |     | MED13    |     |     | PRKCI   |     |     |
| ERBB2    |     |     |     |     | ARNT         |     |     | DCC     |     |     | GSK3B    |     |     | MITF     |     |     | PRKDC   |     |     |
| ERG      |     |     |     |     | ATF1         |     |     | DDB2    |     |     | GSTP1    |     |     | MKI67    |     |     | PRSS8   |     |     |
| EZH2     |     |     |     |     | ATR          |     |     | DDIT3   |     |     | GUCY1A2  |     |     | MMP2     |     |     | PSIP1   |     |     |
| FANCA    |     |     |     |     | ATRX         |     |     | DDR1    |     |     | GUSB     |     |     | MMP11    |     |     | PSMB1   |     |     |
| FBXW7    |     |     |     |     | AURKA        |     |     | DDR2    |     |     | H3F3A    |     |     | MN1      |     |     | PSMB2   |     |     |
| FGFR2    |     |     |     |     | AURKB        |     |     | DDX3X   |     |     | HCAR1    |     |     | MPL      |     |     | PSMB5   |     |     |
| FLT3     |     |     |     |     | AURKC        |     |     | DEK     |     |     | HGF      |     |     | MST1R    |     |     | PSMD1   |     |     |
| FLT4     |     |     |     |     | AXIN1        |     |     | DICER1  |     |     | HIF1A    |     |     | MTR      |     |     | PSMD2   |     |     |
| GATA3    |     |     |     |     | AXL          |     |     | DOT1L   |     |     | HLF      |     |     | MTRR     |     |     | PTCH1   |     |     |
| GNAS     |     |     |     |     | BAG1         |     |     | DPYD    |     |     | HNF1A    |     |     | MUC1     |     |     | PTGS2   |     |     |
| HRAS     |     |     |     |     | BARD1        |     |     | DST     |     |     | HSP90AA1 |     |     | MYB      |     |     | PTPRD   |     |     |
| IDH1     |     |     |     |     | BCL2         |     |     | EMSY    |     |     | HSP90AB1 |     |     | MYBL1    |     |     | PTPRT   |     |     |
| IDH2     |     |     |     |     | BCL2L1       |     |     | EPHA3   |     |     | ICK      |     |     | MYBL2    |     |     | QKI     |     |     |
| IL7R     |     |     |     |     | BCL2L2       |     |     | EPHA5   |     |     | IGF1R    |     |     | MYCN     |     |     | RAC1    |     |     |
| JUN      |     |     |     |     | BCL3         |     |     | EPHA7   |     |     | IGF2R    |     |     | MYH9     |     |     | RAD50   |     |     |
| KIT      |     |     |     |     | BCL6         |     |     | EPHB1   |     |     | IKBK     |     |     | MYH11    |     |     | RAD51   |     |     |
| KMT2C    |     |     |     |     | BCL10        |     |     | EPHB4   |     |     | IKZF1    |     |     | NBN      |     |     | RAD51C  |     |     |
| KMT2D    |     |     |     |     | BCL11B       |     |     | EPHB6   |     |     | IL2      |     |     | NCOA1    |     |     | RAF1    |     |     |
| MAP2K1   |     |     |     |     | BCOR         |     |     | ERBB3   |     |     | IL2RA    |     |     | NCOA2    |     |     | RALGDS  |     |     |
| MAP2K4   |     |     |     |     | BCR          |     |     | ERBB4   |     |     | IL2RB    |     |     | NCOA4    |     |     | RANBP2  |     |     |
| MSH2     |     |     |     |     | BIRC3        |     |     | ERCC1   |     |     | IL2RG    |     |     | NELL2    |     |     | RARA    |     |     |
| MSH6     |     |     |     |     | BIRC5        |     |     | ERCC2   |     |     | IL6ST    |     |     | NFKB1    |     |     | RARG    |     |     |
| MYC      |     |     |     |     | BLM          |     |     | ERCC5   |     |     | IL21R    |     |     | NFKB2    |     |     | REL     |     |     |
| MYD88    |     |     |     |     | BLNK         |     |     | ERRFI1  |     |     | ING4     |     |     | NFKBIA   |     |     | RELA    |     |     |
| NF1      |     |     |     |     | BMPR1A       |     |     | ESR1    |     |     | INHBA    |     |     | NLRP1    |     |     | RET     |     |     |
| NF2      |     |     |     |     | BORCS8-MEF2B |     |     | ETS1    |     |     | INPP4B   |     |     | NOTCH2   |     |     | RHEB    |     |     |
| NFE2L2   |     |     |     |     | BRIP1        |     |     | ETV1    |     |     | INSR     |     |     | NOTCH3   |     |     | RHOA    |     |     |
| NKX2-1   |     |     |     |     | BTG1         |     |     | ETV4    |     |     | IRF4     |     |     | NOTCH4   |     |     | RHOH    |     |     |
| NPM1     |     |     |     |     | BTK          |     |     | ETV5    |     |     | IRS2     |     |     | NSD1     |     |     | RICTOR  |     |     |
| NRAS     |     |     |     |     | BUB1B        |     |     | ETV6    |     |     | ITGA9    |     |     | NSD2     |     |     | RNASEL  |     |     |
| NRK1     |     |     |     |     | CASP8        |     |     | EXT1    |     |     | ITGA10   |     |     | NTRK3    |     |     | RNF2    |     |     |
| PBRM1    |     |     |     |     | CBFB         |     |     | EXT2    |     |     | ITGB2    |     |     | NUMA1    |     |     | RNF43   |     |     |
| PIK3CA   |     |     |     |     | CCNB1        |     |     | FANCC   |     |     | ITGB3    |     |     | NUP93    |     |     | ROS1    |     |     |
| PIK3R1   |     |     |     |     | CCND2        |     |     | FANCI   |     |     | JAK1     |     |     | NUP98    |     |     | RPLP0   |     |     |
| POLE     |     |     |     |     | CCND3        |     |     | FANCL   |     |     | JAK2     |     |     | NUP214   |     |     | RPS6KA2 |     |     |
| PPP2R1A  |     |     |     |     | CD68         |     |     | FAS     |     |     | JAK3     |     |     | NUTM1    |     |     | RPS6KB1 |     |     |
| PRDM1    |     |     |     |     | CD79A        |     |     | FAT1    |     |     | KAT6B    |     |     | PARP1    |     |     | RRM1    |     |     |
| PTPN11   |     |     |     |     | CD274        |     |     | FGF3    |     |     | KDR      |     |     | PAX3     |     |     | RSP02   |     |     |
| RB1      |     |     |     |     | CDA          |     |     | FGF4    |     |     | KEAP1    |     |     | PAX5     |     |     | RSP03   |     |     |
| RECQL4   |     |     |     |     | CDC73        |     |     | FGF10   |     |     | KEL      |     |     | PAX7     |     |     | RUNX1   |     |     |
| SF3B1    |     |     |     |     | CDH2         |     |     | FGF14   |     |     | KLF4     |     |     | PAX8     |     |     | RXRA    |     |     |
| SMAD4    |     |     |     |     | CDH5         |     |     | FGF19   |     |     | KNL1     |     |     | PBX1     |     |     | RXRB    |     |     |
| SMARCA4  |     |     |     |     | CDH11        |     |     | FGF23   |     |     | LAMA2    |     |     | PDCD1LG2 |     |     | RXRG    |     |     |
| SMARCB1  |     |     |     |     | CDH20        |     |     | FGR     |     |     | LAMP1    |     |     | PDE4DIP  |     |     | SAMD9   |     |     |
| SOX2     |     |     |     |     | CDK2         |     |     | FH      |     |     | LCK      |     |     | PDGFB    |     |     | SBDS    |     |     |
| STK11    |     |     |     |     | CDK4         |     |     | FLCN    |     |     | LIFR     |     |     | PDGFRA   |     |     | SCUBE2  |     |     |
| TNFRSF14 |     |     |     |     | CDK8         |     |     | FLI1    |     |     | LMO1     |     |     | PDGFRB   |     |     | SDHA    |     |     |
| TP53     |     |     |     |     | CDKN1A       |     |     | FLT1    |     |     | LPP      |     |     | PDK1     |     |     | SDHB    |     |     |
| TSC1     |     |     |     |     | CDKN1B       |     |     | FOXO1   |     |     | LRP1B    |     |     | PER1     |     |     | SDHC    |     |     |
| USP9X    |     |     |     |     | CDKN2C       |     |     | FOXO3   |     |     | LTF      |     |     | PGAP3    |     |     | SDHD    |     |     |
| WRN      |     |     |     |     | CHD7         |     |     | FOXO3   |     |     | LTK      |     |     | PGR      |     |     | SEPT9   |     |     |
| XPO1     |     |     |     |     | CHEK1        |     |     | FOXP1   |     |     | LYN      |     |     | PHF6     |     |     | SGK1    |     |     |
|          |     |     |     |     | CHEK2        |     |     | FRS2    |     |     | MAF      |     |     | PHOX2B   |     |     | SH2D1A  |     |     |
|          |     |     |     |     | CHIC2        |     |     | FSTL5   |     |     | MAFB     |     |     | PIK3CD   |     |     | SHH     |     |     |
|          |     |     |     |     | CKS1B        |     |     | FUBP1   |     |     | MAGEA1   |     |     | PIK3CG   |     |     | SHOC2   |     |     |
|          |     |     |     |     | CMPK1        |     |     | FZR1    |     |     | MAGI2    |     |     | PIK3R2   |     |     | SLC22A1 |     |     |

【SNV検出】  
● Missense  
● Frameshift Indel  
★ Fusion  
◆ Inframe Indel  
♥ Nonsense  
+ ITD  
▼ Stop Loss  
● Other  
★ Multiple

【遺伝子発現プロファイル】  
低 ← 遺伝子発現レベル → 高  
Log<sub>2</sub> -4.0 -2.0 0 2.0 4.0

臨床情報

F\_PDX\_000216

|             |                         |     |          |          |    |
|-------------|-------------------------|-----|----------|----------|----|
| 臨床情報シート区分   |                         | 肺腫瘍 |          |          |    |
| 性 別         | 男                       | 年 齢 | 77 歳     | 採 取 部 位  | 胸水 |
| 診 断 名       | 臓器分類: 肺、気管支 L           |     |          |          |    |
|             | 病理診断名                   |     | 診断コード    |          |    |
|             | 肺腫瘍の転移                  |     | L6       |          |    |
|             | 乳頭型腺がん                  |     | L2.1.03  |          |    |
|             | 置換型腺がん                  |     | L2.1.01  |          |    |
| 病 期 分 類     | 原発腫瘍 (T)                | T4  | (原発)右肺がん |          |    |
|             | 所属リンパ節 (N)              | N0  | (原発)右肺がん |          |    |
|             | 遠隔転移 (M)                | M1  | (M1a )   | (原発)右肺がん |    |
|             | ステージ                    | IV  | (原発)右肺がん |          |    |
|             | 分化度 (G)                 | G1  | (原発)右肺がん |          |    |
| 手 術・病 理 所 見 | 胸水/胸腔洗浄液 CLASS V 異型細胞あり |     |          |          |    |
| 免疫組織学的 検 査  |                         |     |          |          |    |
| 既 往 歴       | 胃がん, 糖尿病                |     |          |          |    |
| 放射線療法歴      |                         |     |          |          |    |
| 薬剤治療歴       | ゲフィチニブ                  |     |          |          |    |
| 喫 煙 歴       | あり (過去)                 |     |          |          |    |
| 飲 酒 歴       | あり (機会飲酒)               |     |          |          |    |
| 特 記 事 項     |                         |     |          |          |    |