

Description of Additional Supplementary Files

File Name: Supplementary Data 1

Description: Clinical information of 161 patients with esophageal squamous cell carcinoma (ESCC).

File Name: Supplementary Data 2

Description: Gene list of deep sequencing.

File Name: Supplementary Data 3

Description: Quality control of deep sequence data.

File Name: Supplementary Data 4

Description: Single nucleotide variants (SNVs) and Indels results of 161 ESCC samples.

File Name: Supplementary Data 5

Description: Copy number variations (CNVs) of 161 ESCC samples.

File Name: Supplementary Data 6

Description: Clinical information of 123 patients with ESCC and associations between the success rate of patient-derived cancer cell line (PDC) establishment and these clinical characteristics.

File Name: Supplementary Data 7

Description: Karyotype results of eight ESCC PDCs.

File Name: Supplementary Data 8

Description: Short tandem repeat results of eight ESCC PDCs.

File Name: Supplementary Data 9

Description: SNVs and Indels results of eight ESCC PDCs.

File Name: Supplementary Data 10

Description: CNVs of eight ESCC PDCs.

File Name: Supplementary Data 11

Description: Potential drug-genotype associations in eight ESCC PDCs.

File Name: Supplementary Data 12

Description: Half-maximal inhibitory concentrations (IC50s) of 46 compounds on eight ESCC PDCs.

File Name: Supplementary Data 13

Description: Analysis of drug-gene associations of eight ESCC PDCs in 46 compounds.

File Name: Supplementary Data 14

Description: IC50s of CDK4/6 inhibitors palbociclib, ribociclib, and abemaciclib on eight ESCC PDCs in the validation.

File Name: Supplementary Data 15

Description: Clinical characteristics of eight PDC corresponding patients and associations between clinical characteristics of eight PDC corresponding patients and sensitivities of palbociclib and ribociclib.

File Name: Supplementary Data 16

Description: Mutational profiles of 10 commercial cell lines from CCLE project.

File Name: Supplementary Data 17

Description: Difference analysis of mRNA level between mutated PDCs and non-mutated PDCs of cell cycle regulation genes.

File Name: Supplementary Data 18

Description: Clinical information of an ESCC patient whose tumor tissue was used for patient-derived xenografts (PDXs).

File Name: Supplementary Data 19

Description: Mutational profile of ESCC PDX model.

File Name: Supplementary Data 20

Description: IHC results of p15, p16, and Ki67 in FFPE tumor tissues from PDXs treated with different dosages of palbociclib.