



**KINETO Lab • BIOTECHNOLOGY**

# **Kineto Lab Ltd.**

**Patient-derived tumor xenograft (PDX) model characterization**

**Budapest**

**2021.**

## Model properties

Code: **KIN-AD1**

Tumor type/subtype: Non-small cell lung cancer/adenocarcinoma  
Primary/metastatic: primary  
Patient age: 83 years  
Patient sex: male  
Smoking status: unknown  
Treatment-naïve: former metastasis surgery, drug-naïve

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	Status
TP53	wt
EGFR	Arg521Lys
KRAS	wt
LRP1B	Val1913Met Gln3140Arg Gln48Arg
KEAP1	wt
FAT4	wt
STK11	wt
SMARCA4	wt
FAT1	Arg2567His

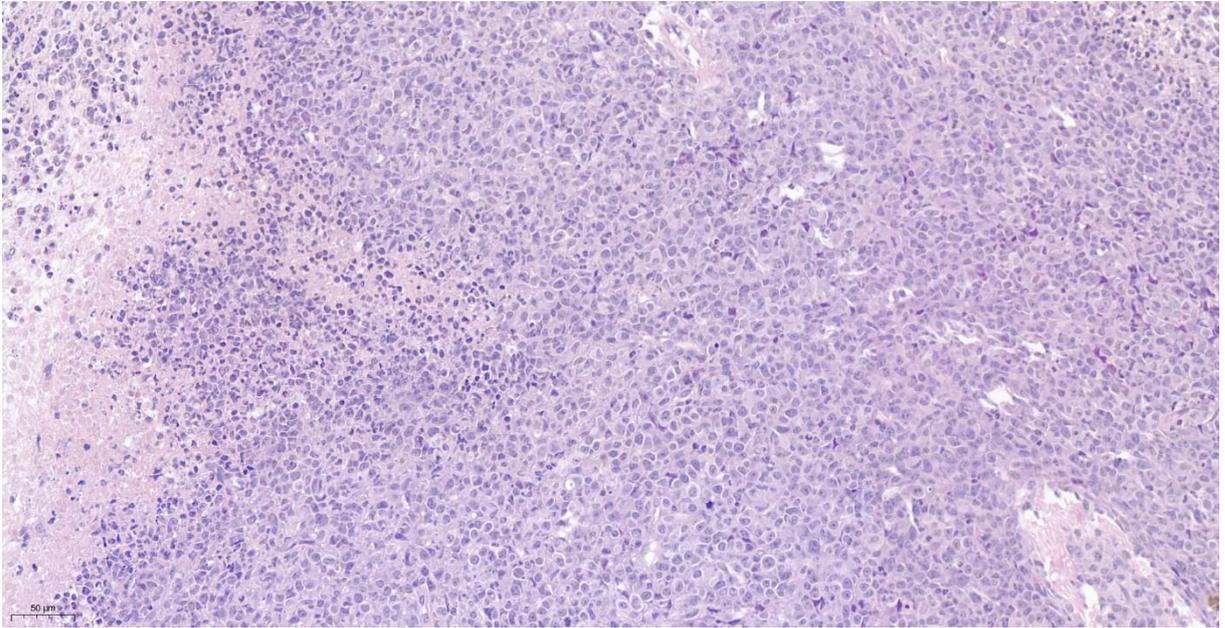
Gene	Status
KMT2C	wt
RBM10	wt
PTPRT	wt
SETBP1	Val1101Ile
NF1	wt
CDKN2A	wt
ATM	Asp1853Asn
ZNF521	wt
ARID1A	wt
KMT2D	wt
GRIN2A	wt

## Tumor PDX growth

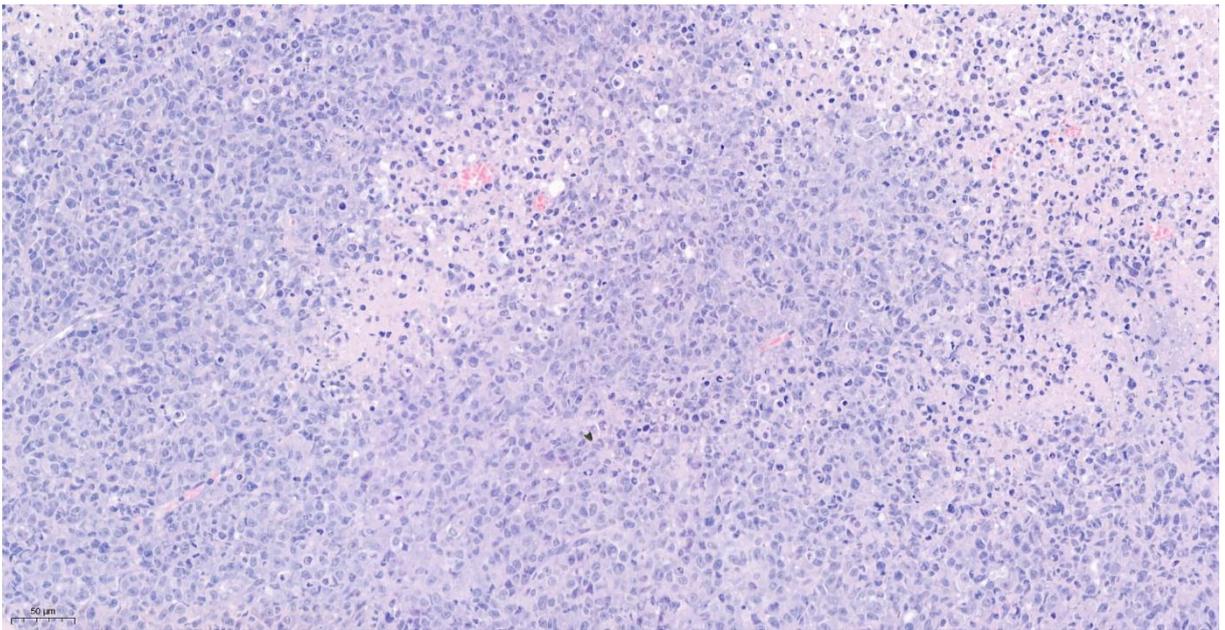
Time to measurable tumor: 35 days  
Time to reach 200mm<sup>3</sup> tumor size: 40 days  
Time to reach 1000 mm<sup>3</sup> tumor size: 48 days

## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-ID1**

Tumor type/subtype: Diffuse glioma

Primary/metastatic: primary

Patient age: 3 years

Patient sex: female

Smoking status: non-smoker

Treatment-naïve: yes

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	Status
TERT	wt
TP53	wt
TP53	Arg342Ter - stop gained
PTEN	wt
CDKN2A	wt
EGFR	wt
IDH1	wt
H3F3A	wt
NF1	wt
ATRX	wt

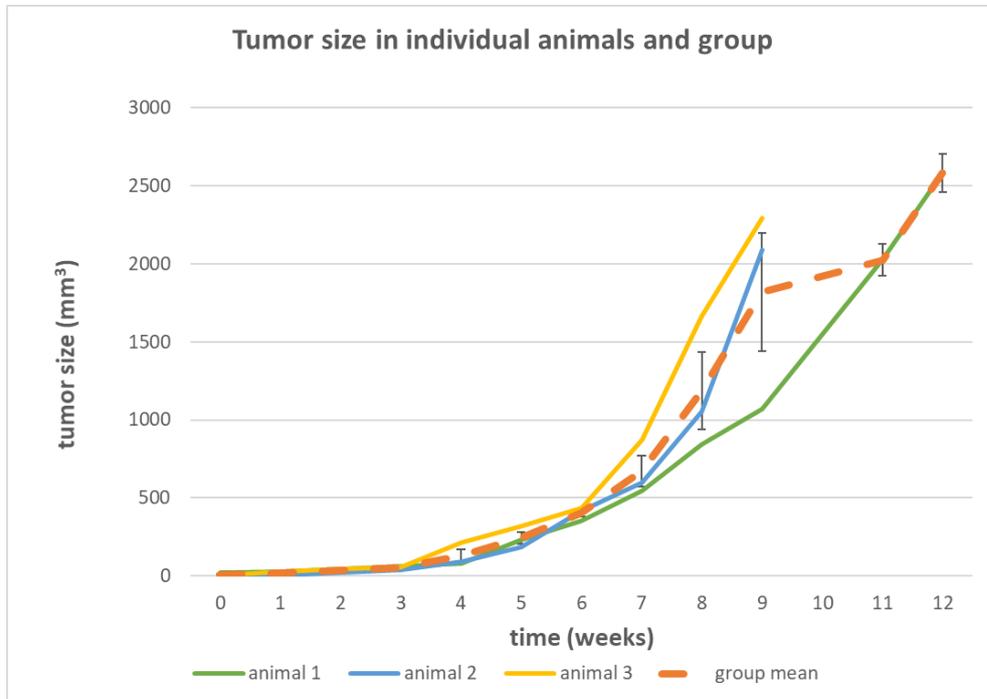
Gene	Status
PIK3CA	wt
RB1	wt
CHEK2	wt
PIK3R1	wt
PDGFRA	wt
IRS4	wt
SETD2	Met1080Ile
MSH6	Gly39Glu
PTCH1	Arg1442Trp Pro1315Leu

## Tumor PDX growth

Time to measurable tumor: 13 days

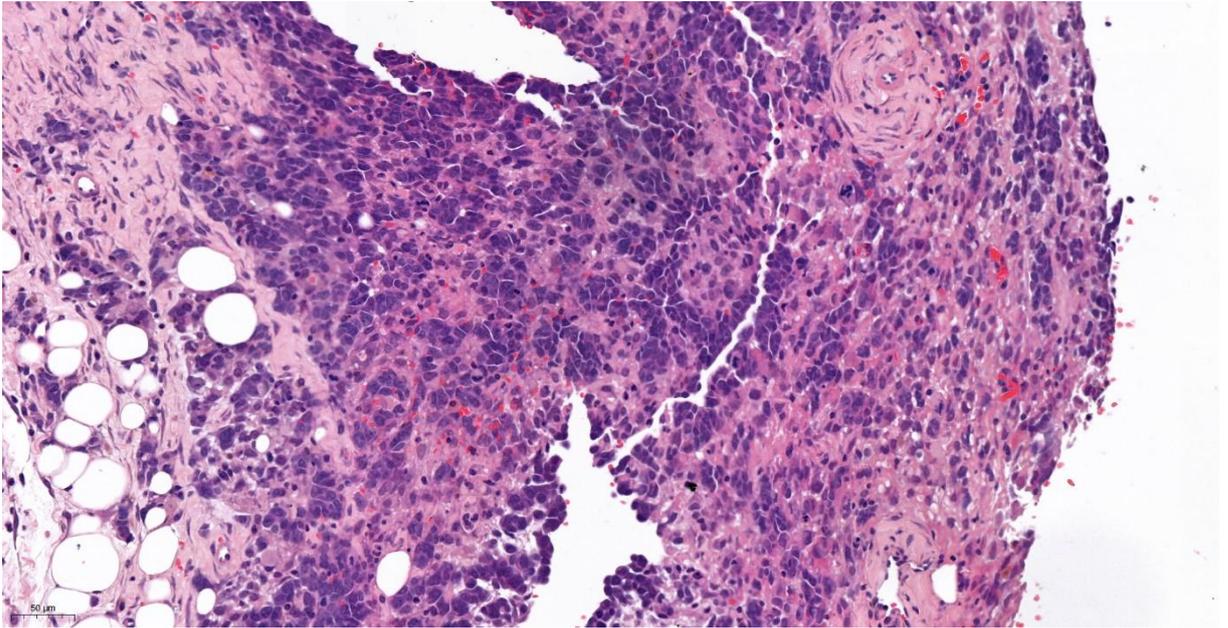
Time to reach 200mm<sup>3</sup> tumor size: 53 days

Time to reach 1000 mm<sup>3</sup> tumor size: 75 days

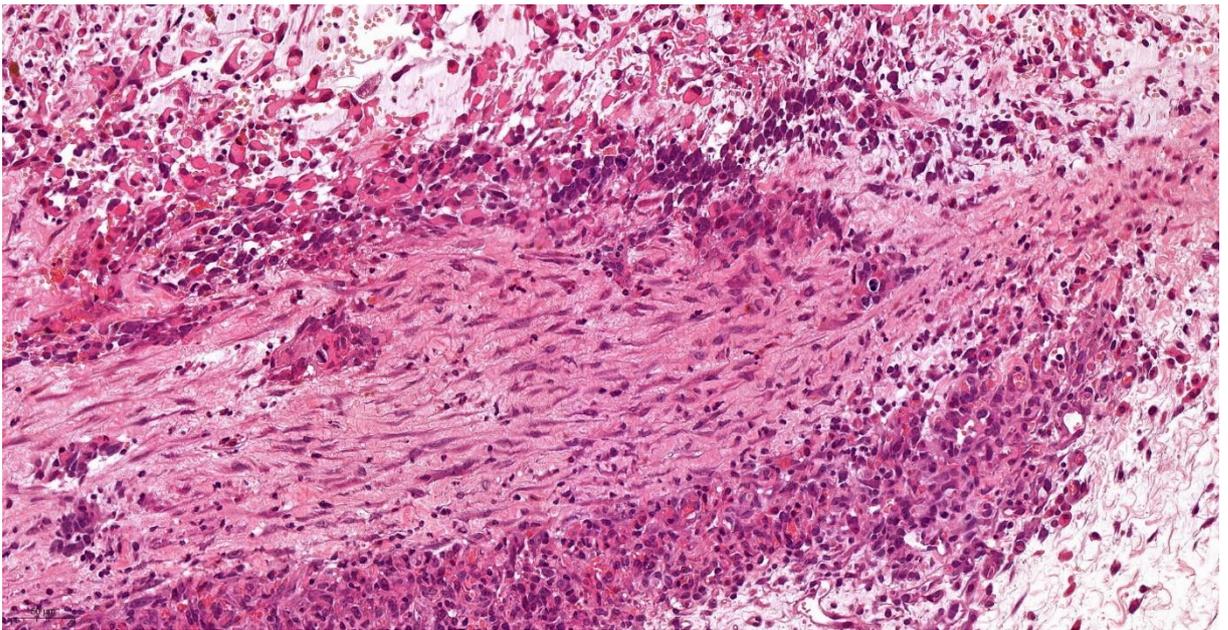


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-ID2**

Tumor type/subtype: Glioblastoma

Primary/metastatic: primary

Patient age: 69 years

Patient sex: female

Smoking status: unknown

Treatment-naïve: unknown

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	Status
TERT	wt
TP53	wt
PTEN	wt
CDKN2A	wt
EGFR	Arg252Cys
IDH1	wt
H3F3A	wt
ATRX	wt
PIK3CA	wt
RB1	wt
CHEK2	wt

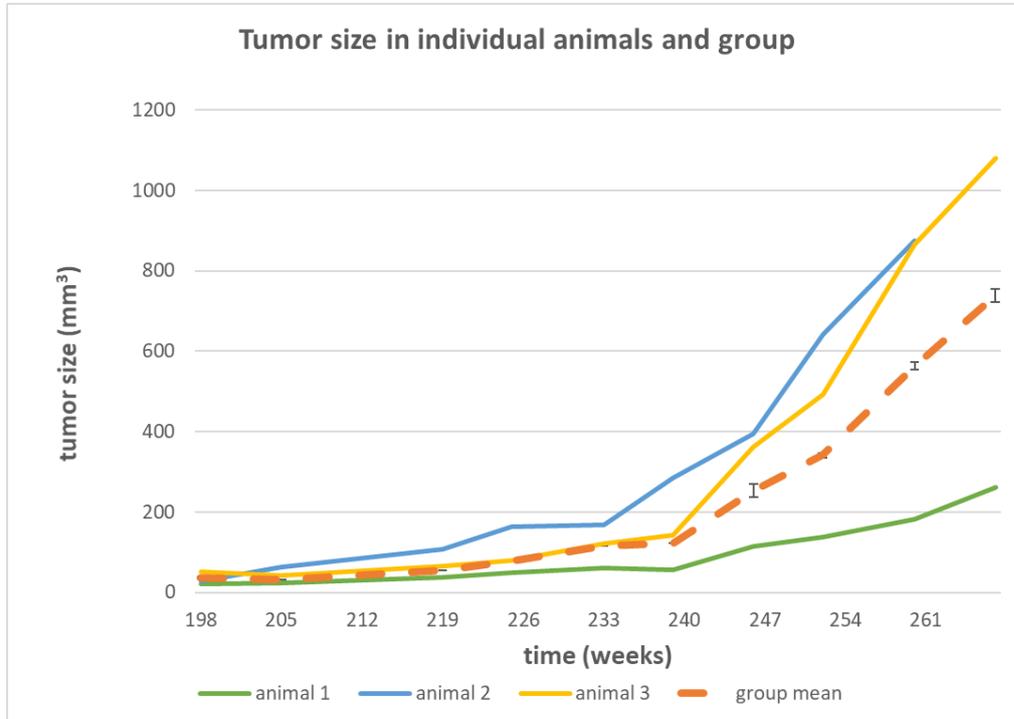
Gene	Status
PIK3R1	wt
PDGFRA	wt
IRS4	wt
LRP1B	Thr1043Ser Gln48Arg
CIC	Ala1931Val
NOTCH1	Arg1279His
KMT2D	wt
MSH6	Gly39Glu
PTCH1	Pro1315Leu
AXIN2	Arg538Trp

## Tumor PDX growth

Time to measurable tumor: 200 days

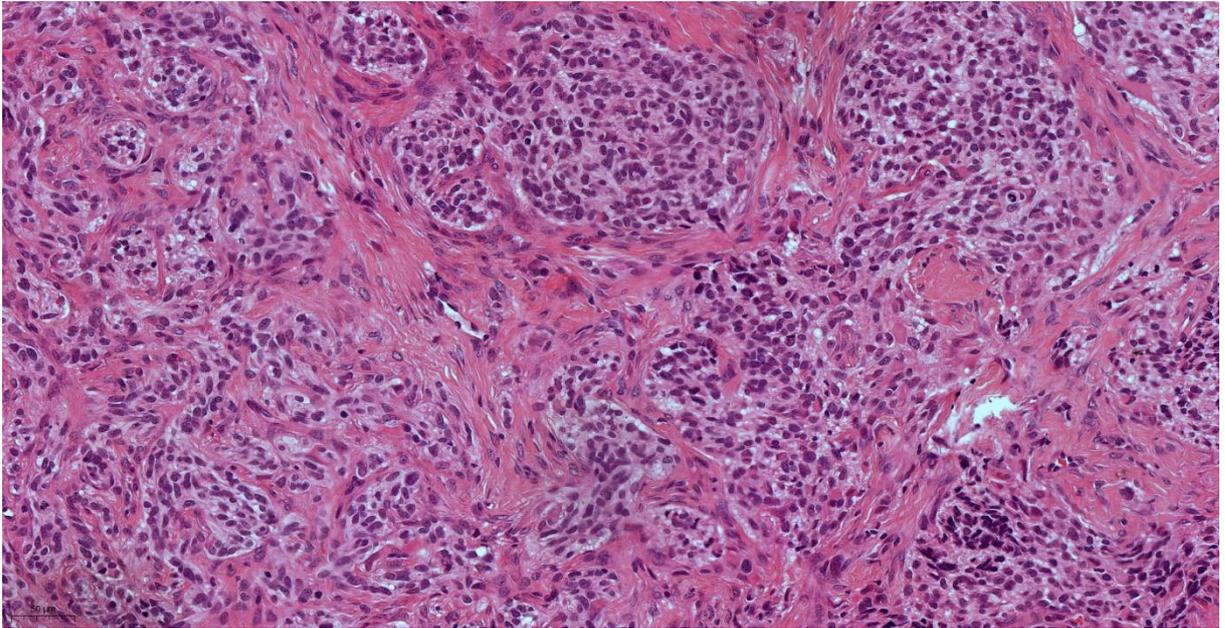
Time to reach 200mm<sup>3</sup> tumor size: 246 days

Time to reach 1000 mm<sup>3</sup> tumor size: about 280 days

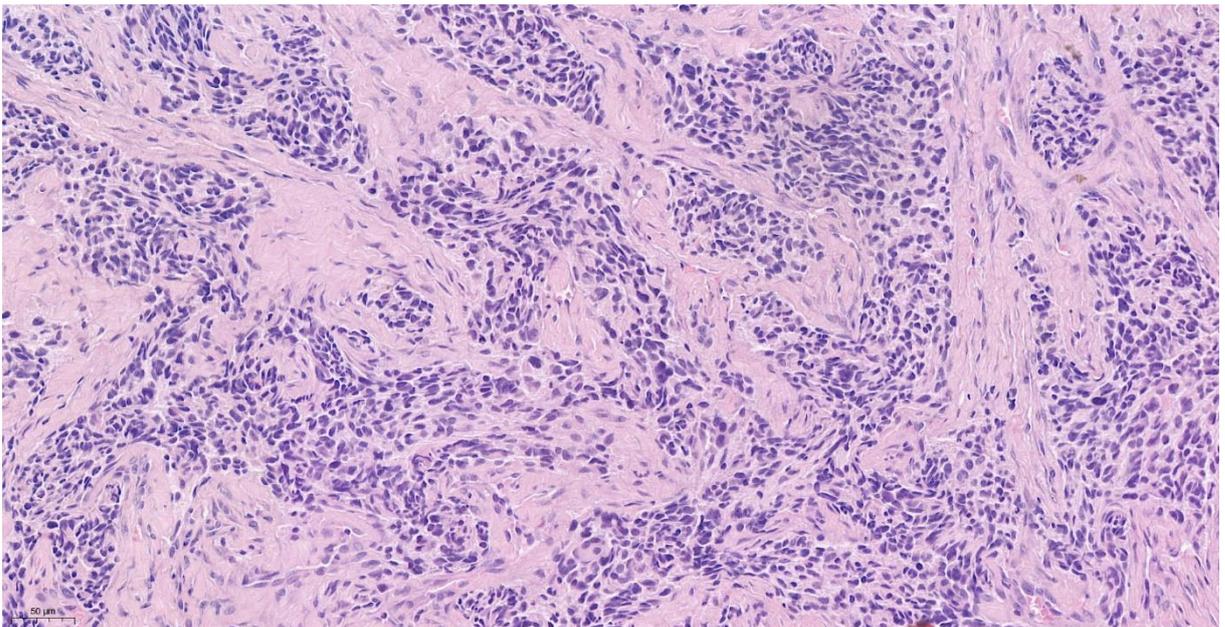


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-ID6**

Tumor type/subtype: Non-small cell lung cancer/adenocarcinoma

Primary/metastatic: brain metastasis

Patient age: 72 years

Patient sex: female

Smoking status: unknown

Treatment-naïve: unknown

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	Status
TERT	wt
TP53	His179Leu
PTEN	wt
CDKN2A	Ala68Pro
EGFR	wt
IDH1	wt
H3F3A	wt
NF1	wt
ATRX	wt
PIK3CA	wt
RB1	wt

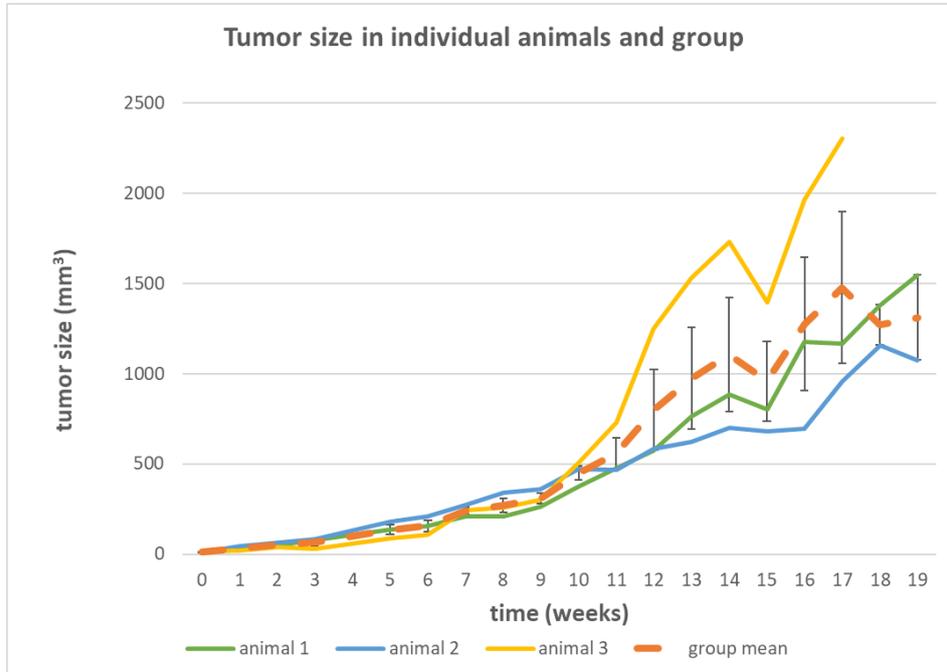
Gene	Status
CHEK2	wt
PIK3R1	wt
PDGFRA	Gly1005Ser
IRS4	wt
LRP1B	Gly2521Arg
MSH6	wt
NOTCH2	wt
IDH2	wt
FUBP1	wt
CTNNB1	wt

## Tumor PDX growth

Time to measurable tumor: 14 days

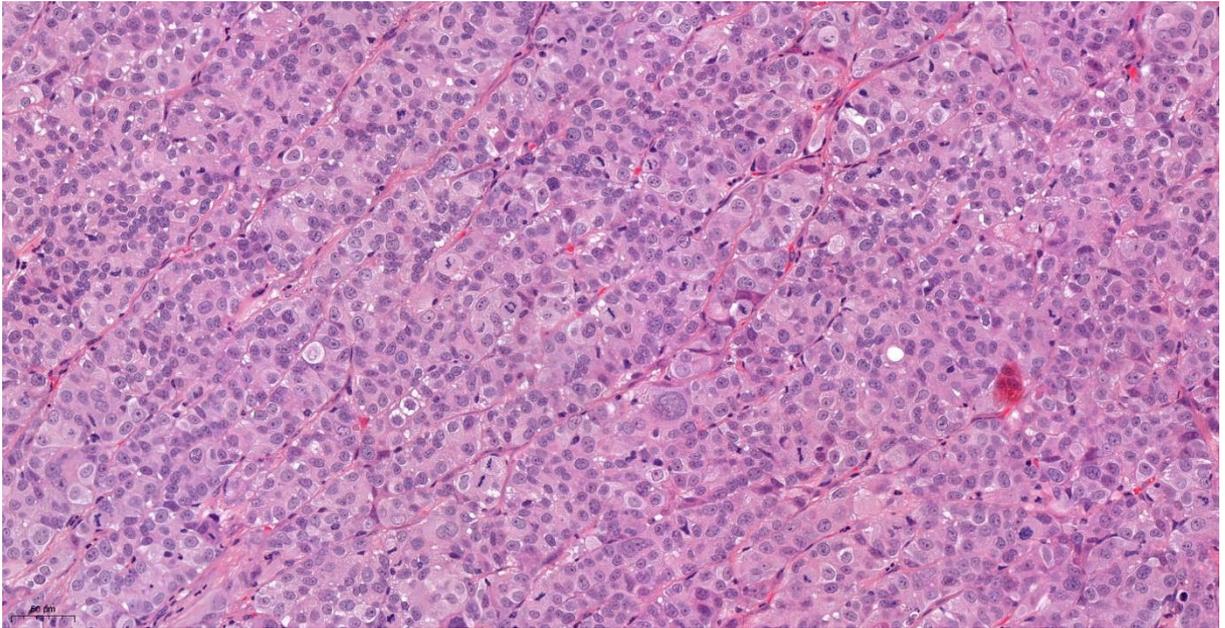
Time to reach 200mm<sup>3</sup> tumor size: 64 days

Time to reach 1000 mm<sup>3</sup> tumor size: 113 days

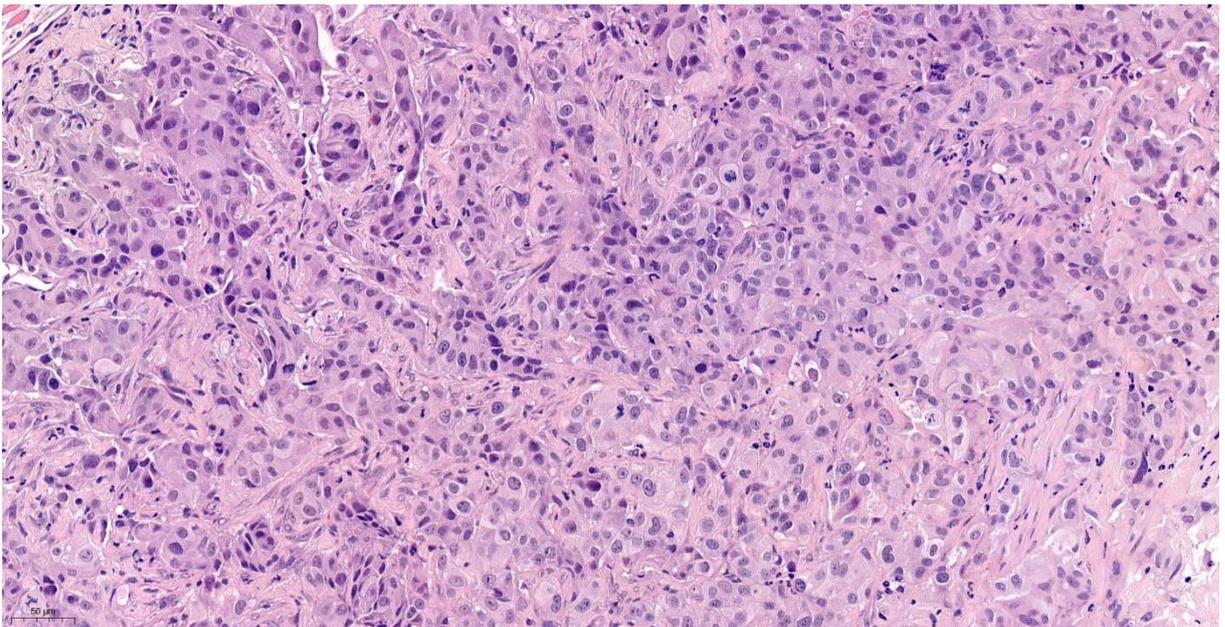


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-MET2**

Tumor type/subtype: Colorectal adenocarcinoma

Primary/metastatic: liver metastasis

Patient age: 63 years

Patient sex: female

Smoking status: smoker

Treatment-naïve: yes

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	status
TP53	wt
LRP1B	wt
FAT4	wt
ARID1A	wt
PIK3CA	wt
PREX2	wt
KMT2D	wt
KMT2C	wt
ERBB3	Ser1119Cys
TRRAP	wt

Gene	status
CDH1	wt
PTPRT	wt
SPEN	wt
BCORL1	wt
ERBB4	wt
RNF213	wt
TGFBR2	wt
ZFHX3	wt
RNF43	Leu418Met
CREBBP	wt

**Tumor PDX growth**

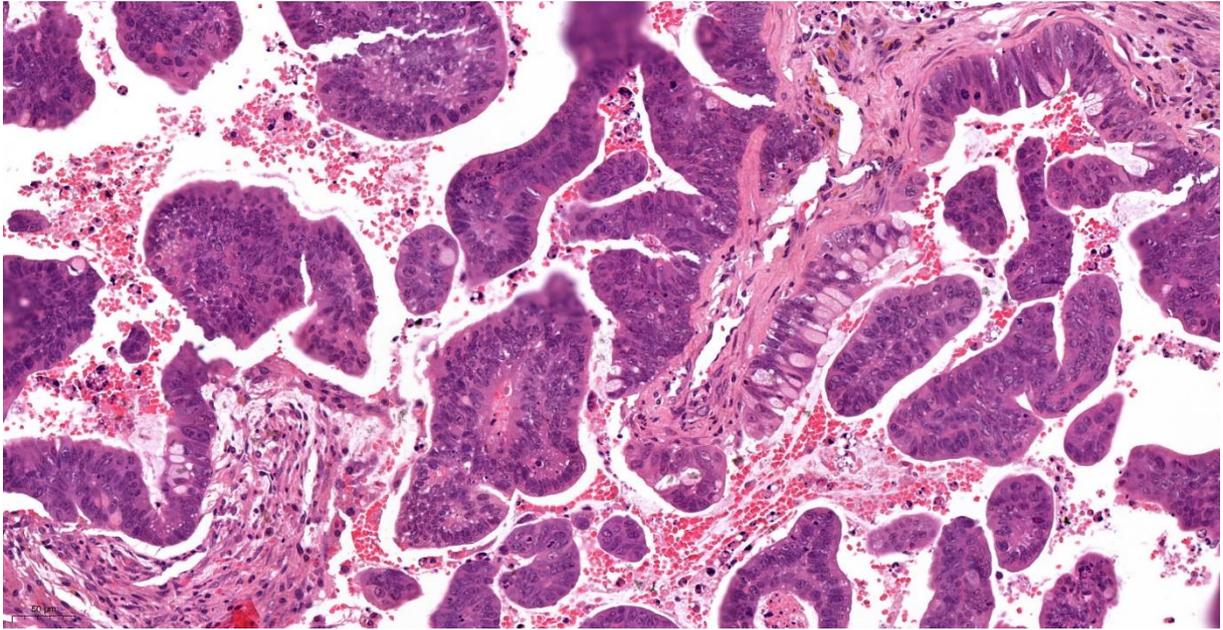
Time to measurable tumor: not available

Time to reach 200mm<sup>3</sup> tumor size: not available

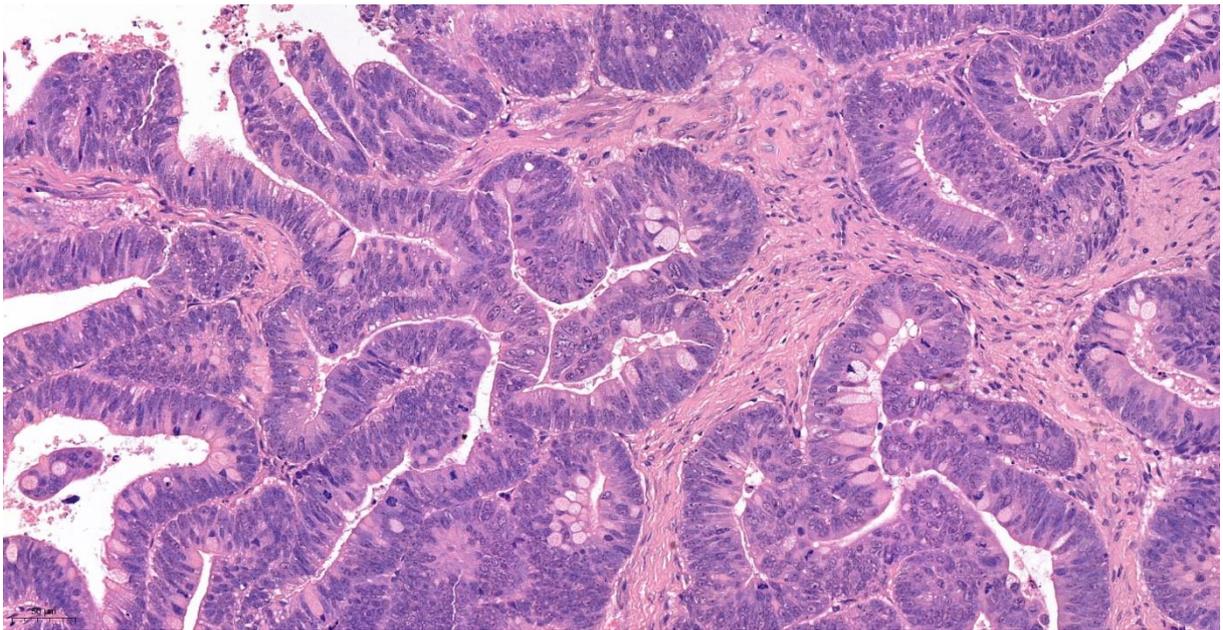
Time to reach 1000 mm<sup>3</sup> tumor size: not available

## Tumor PDX Morphology

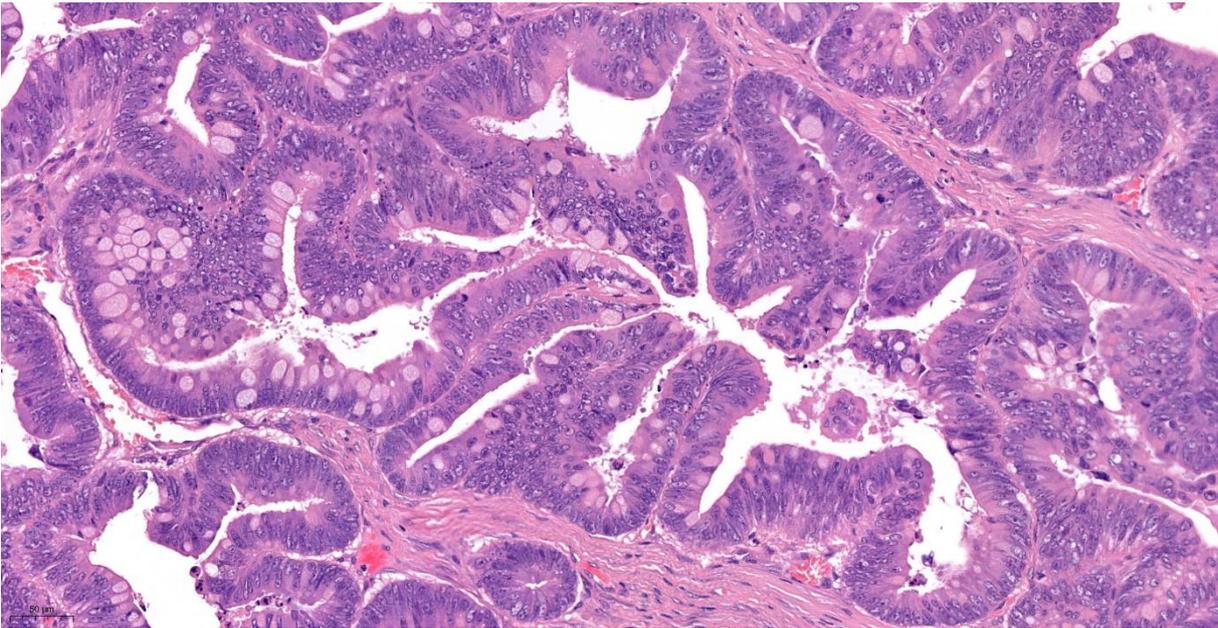
Generation 1:



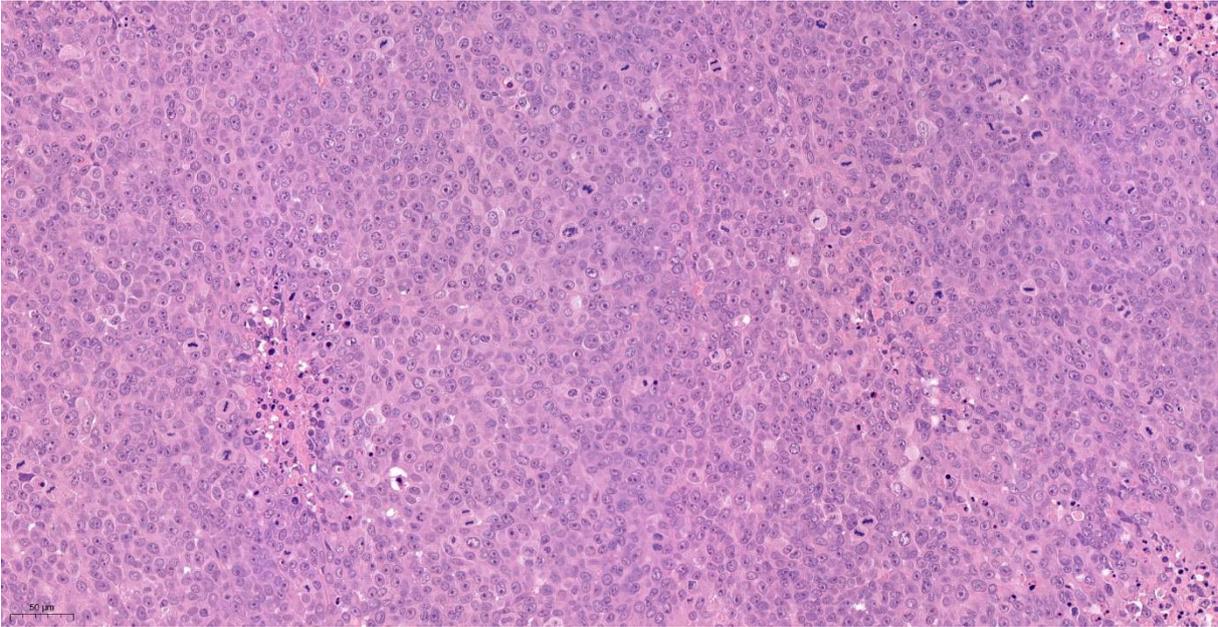
Generation 2:



Generation 3:



Derived cell line-based xenograft:



## Model properties

Code: **KIN-MET3**

Tumor type/subtype: gastric cancer/adenocarcinoma

Primary/metastatic: liver metastasis

Patient age: 74 years

Patient sex: female

Smoking status: unknown

Treatment-naïve: no

## Genetic background

*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

Gene	status
APC	wt
TP53	Arg213Ter - stop gained
KRAS	wt
FAT4	wt
LRP1B	Cys3342Phe
	Gly3232Trp
	Arg2235Ter - stop gained
PIK3CA	wt
TGFBR2	wt
BRAF	wt
ACVR2A	wt
KMT2C	wt

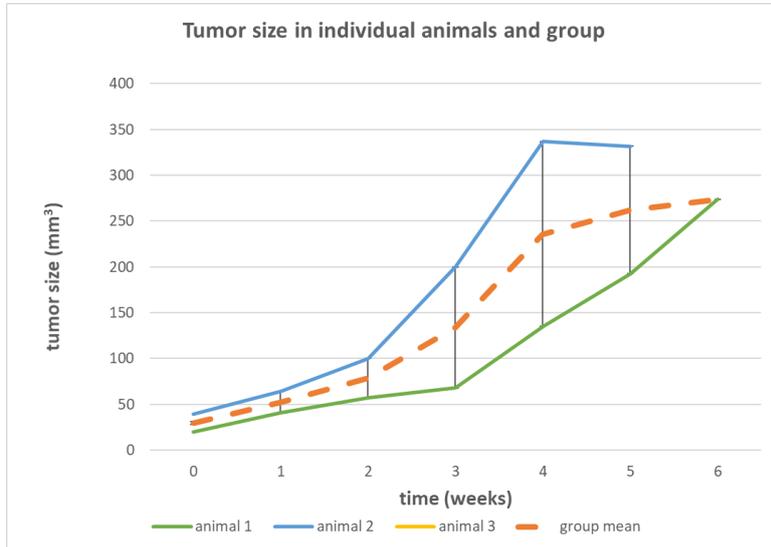
Gene	status
ZFH3	Ala2405Thr
KMT2D	wt
FBXW7	wt
RNF43	wt
ARID1A	wt
SMAD4	wt
TRRAP	wt
FAT1	Gly2653Ser
	Asn1662Ser
	Val3334Ala
	Ser3554Ala
TCF7L2	wt
PREX2	wt

## Tumor PDX growth

Time to measurable tumor: 55 days

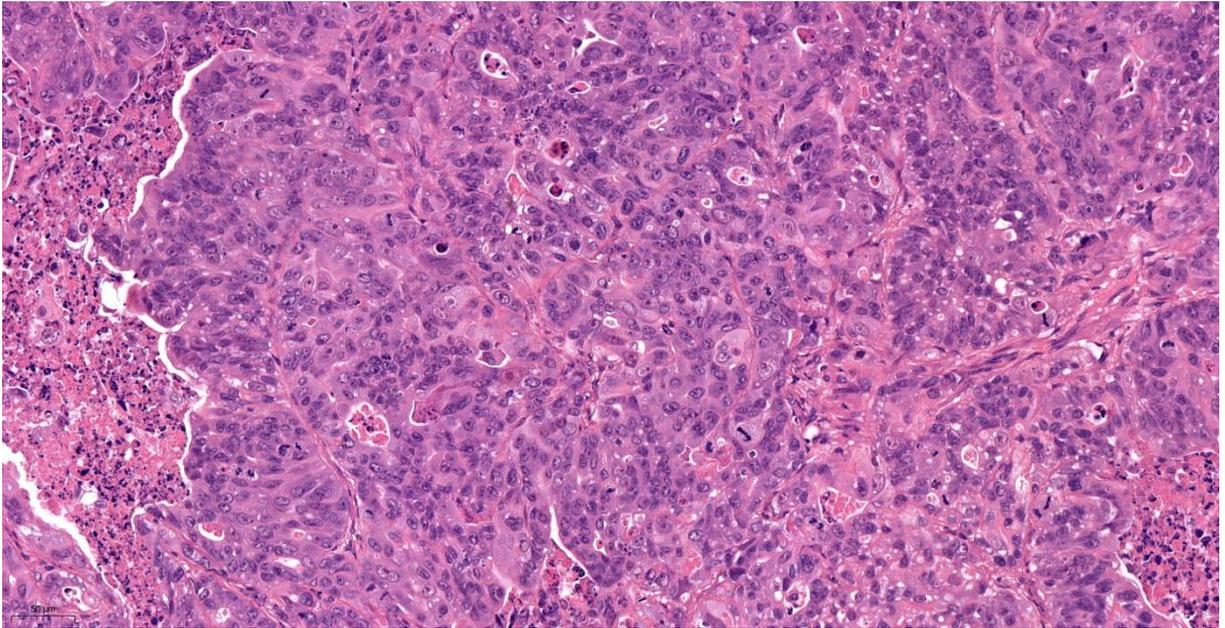
Time to reach 200mm<sup>3</sup> tumor size: 85 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown

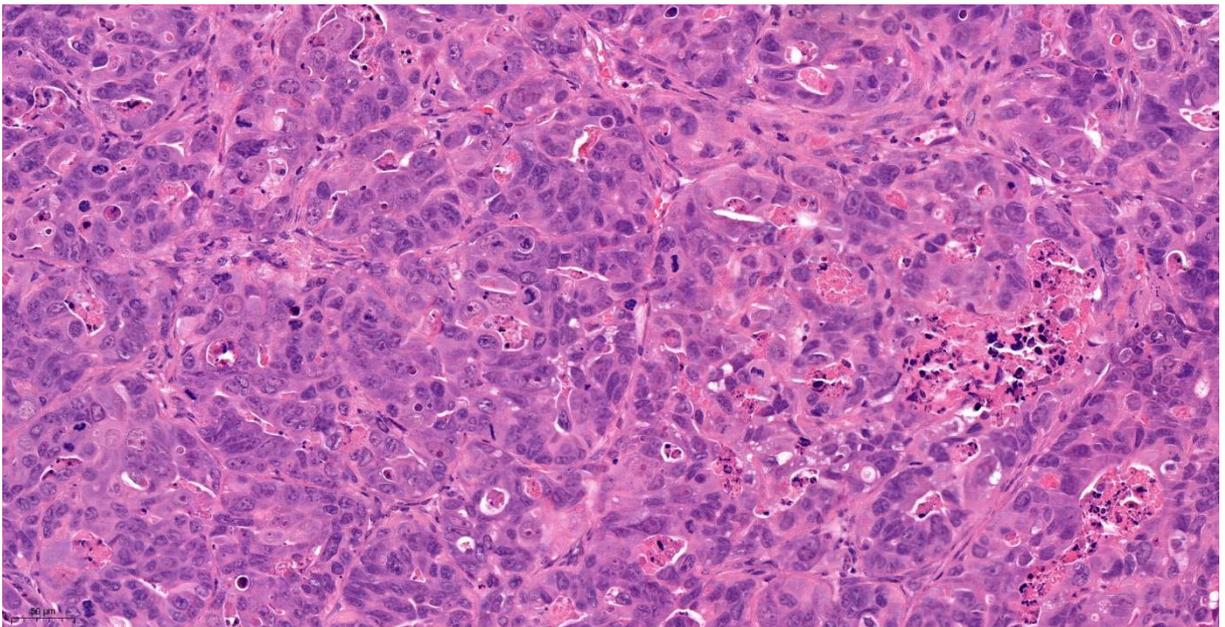


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-MET6**

Tumor type/subtype: Hepatocellular carcinoma

Primary/metastatic: primary

Patient age: 73 years

Patient sex: male

Smoking status: non-smoker

Treatment-naïve: no

## Genetic background

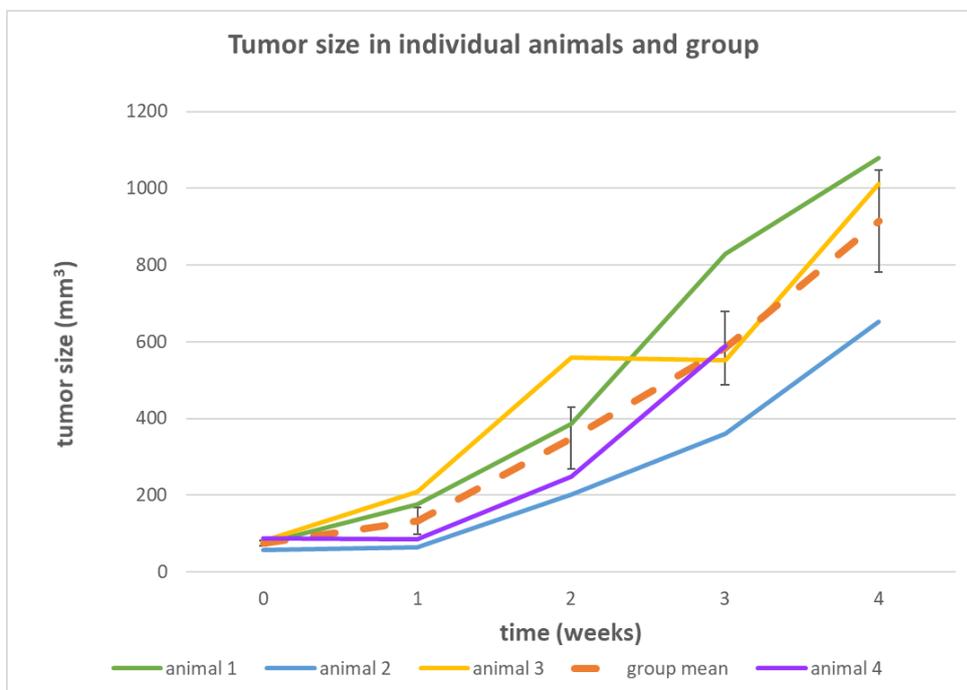
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 14 days

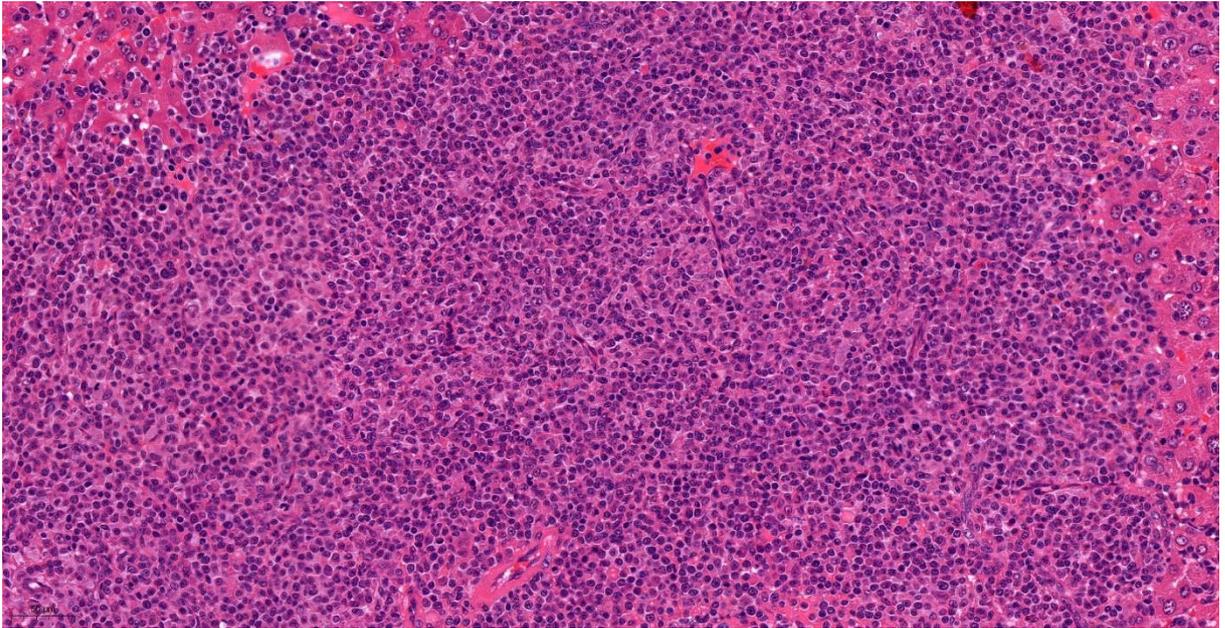
Time to reach 200mm<sup>3</sup> tumor size: 28 days

Time to reach 1000 mm<sup>3</sup> tumor size: about 42 days

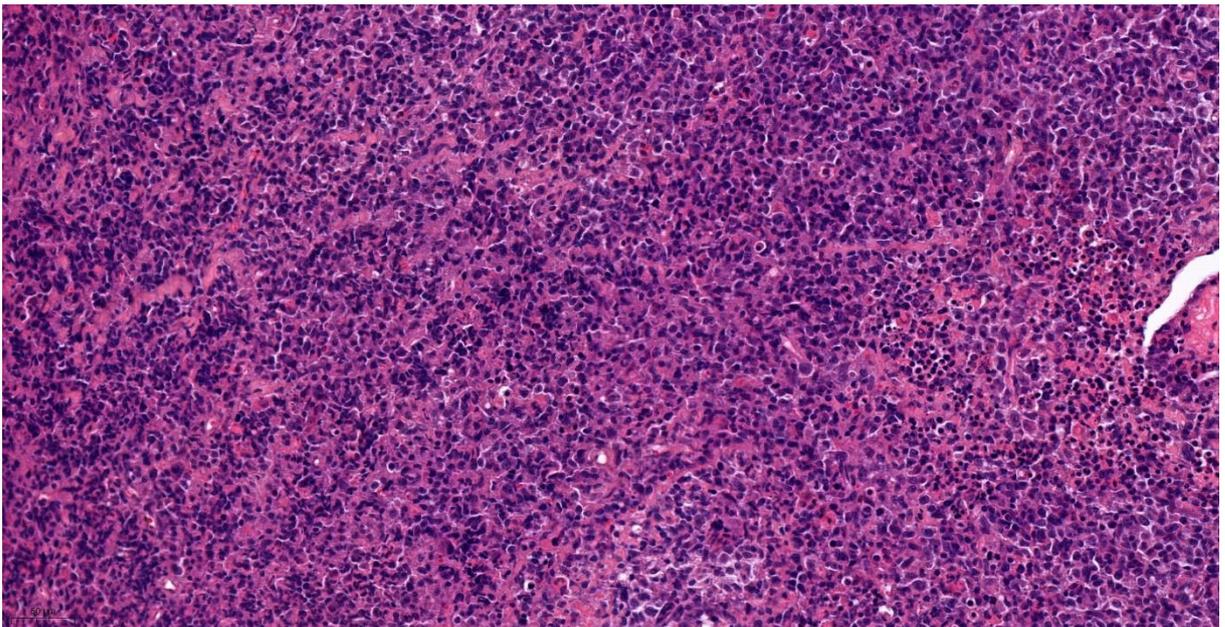


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-MET12**

Tumor type/subtype: Colorectal adenocarcinoma

Primary/metastatic: liver metastasis

Patient age: 69 years

Patient sex: male

Smoking status: former smoker

Treatment-naïve: no

## Genetic background

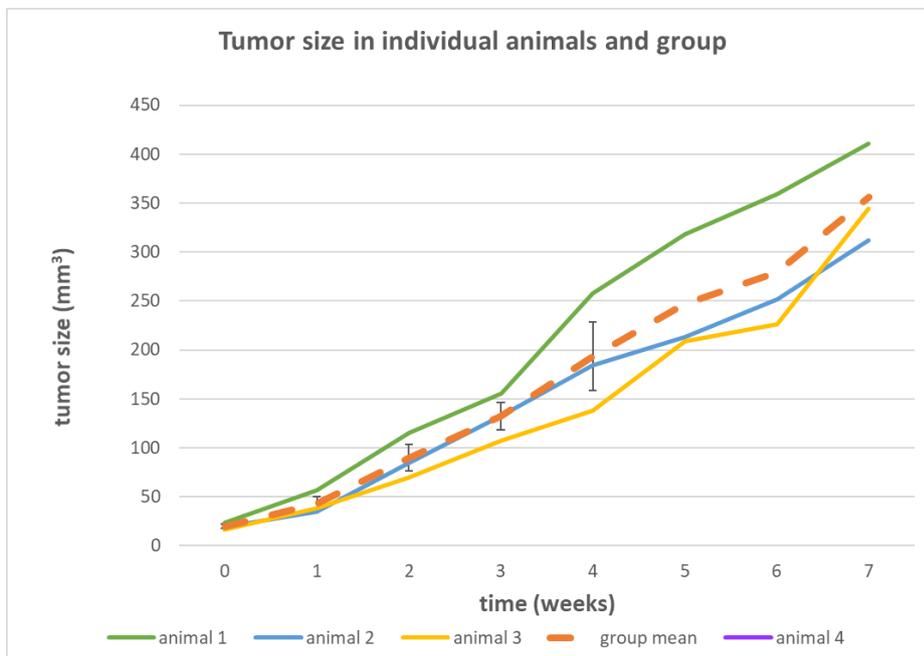
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 22 days

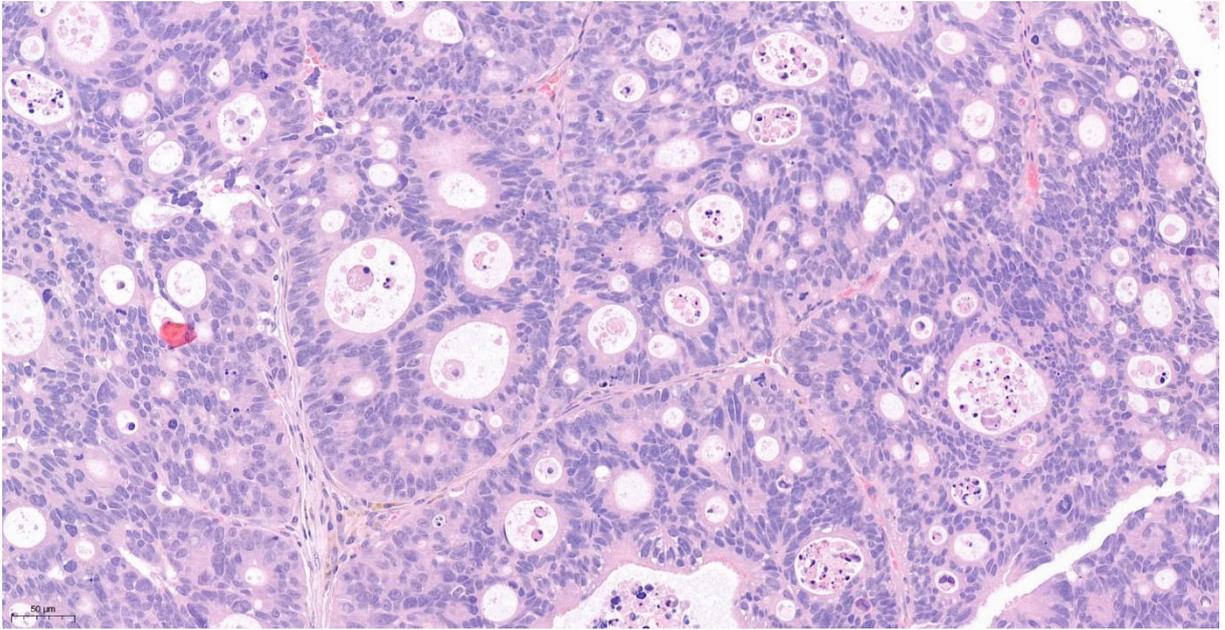
Time to reach 200mm<sup>3</sup> tumor size: 57 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown

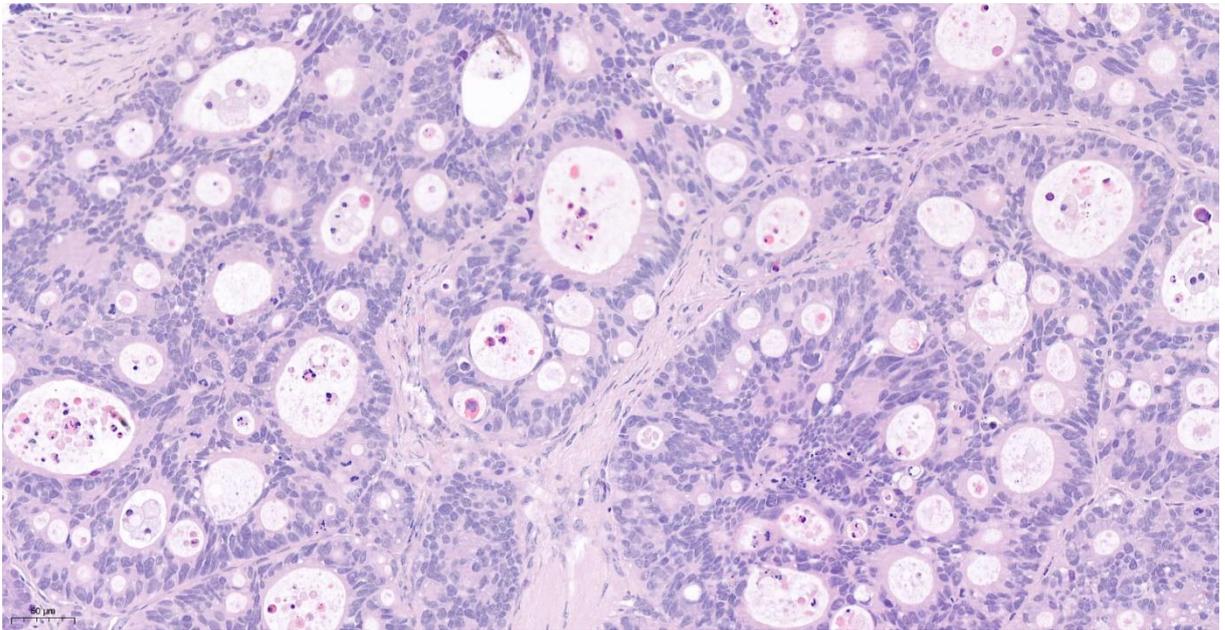


## Tumor PDX Morphology

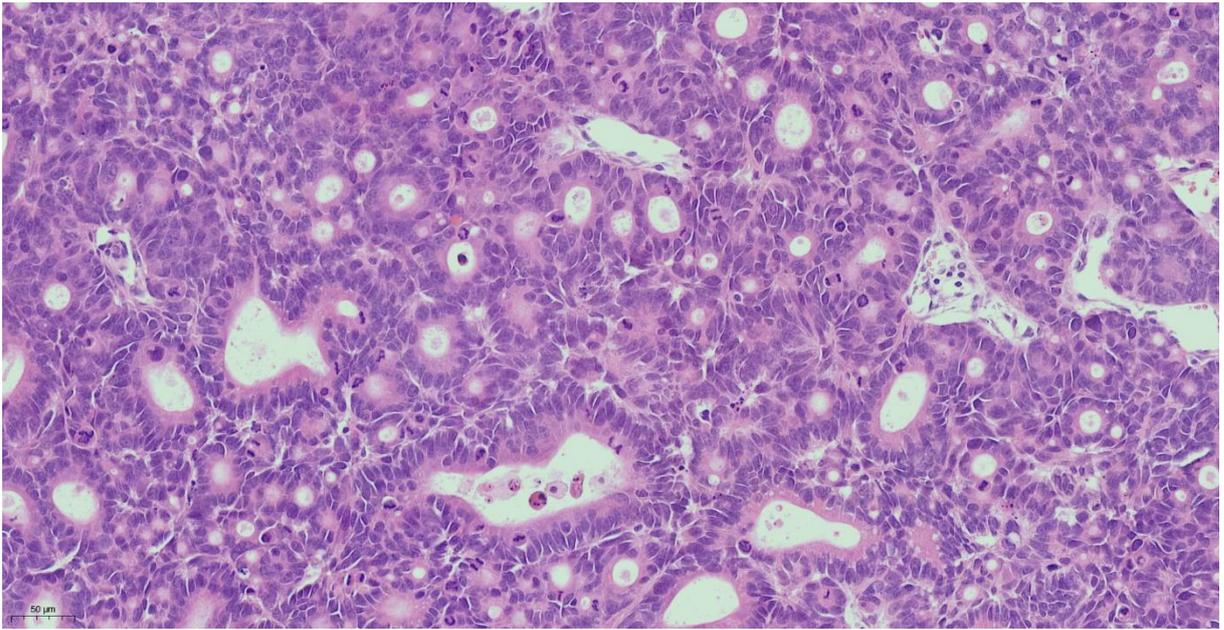
Generation 1:



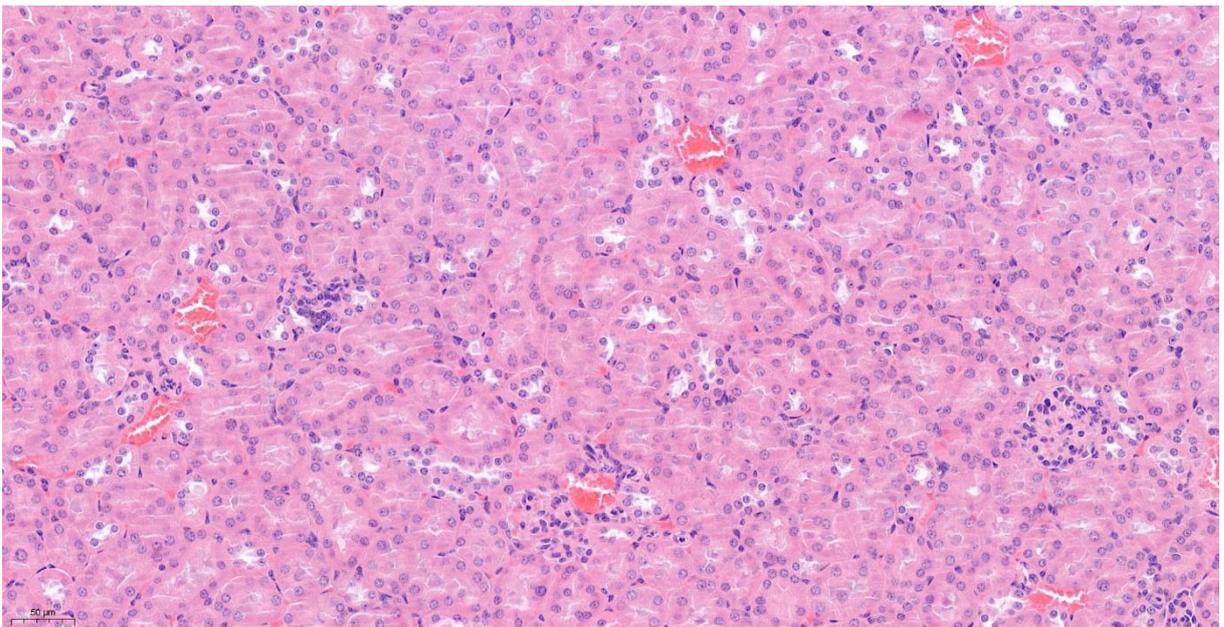
Generation 2:



Generation 3:



Generation 4:



## Model properties

Code: **KIN-SUD82**

Tumor type/subtype: Malignant melanoma

Primary/metastatic:

Patient age: 73 years

Patient sex: Male

Smoking status:

Treatment-naïve:

## Genetic background

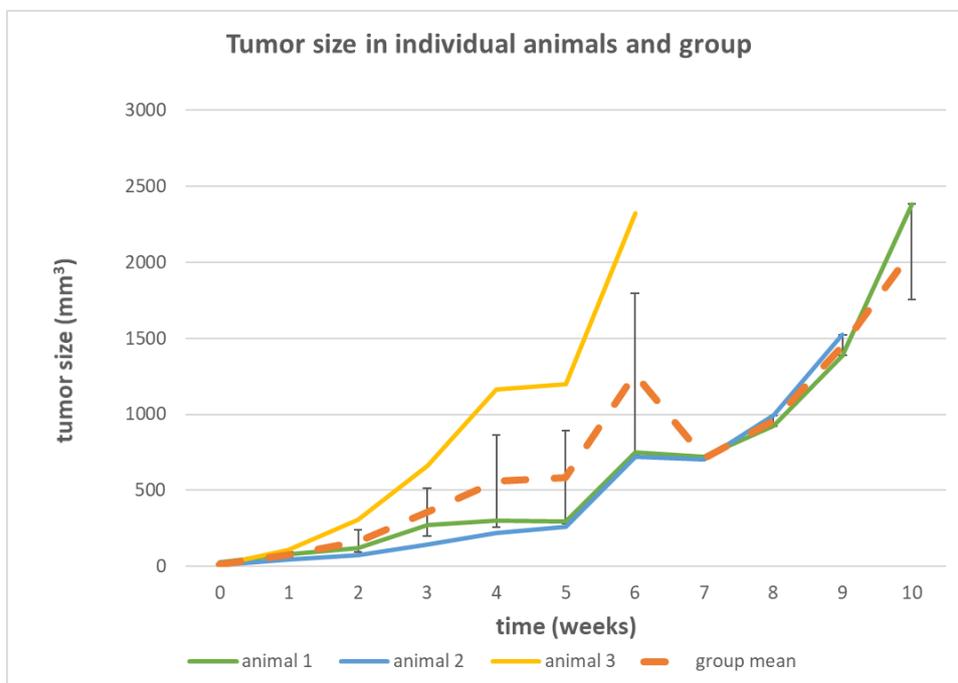
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 18 days

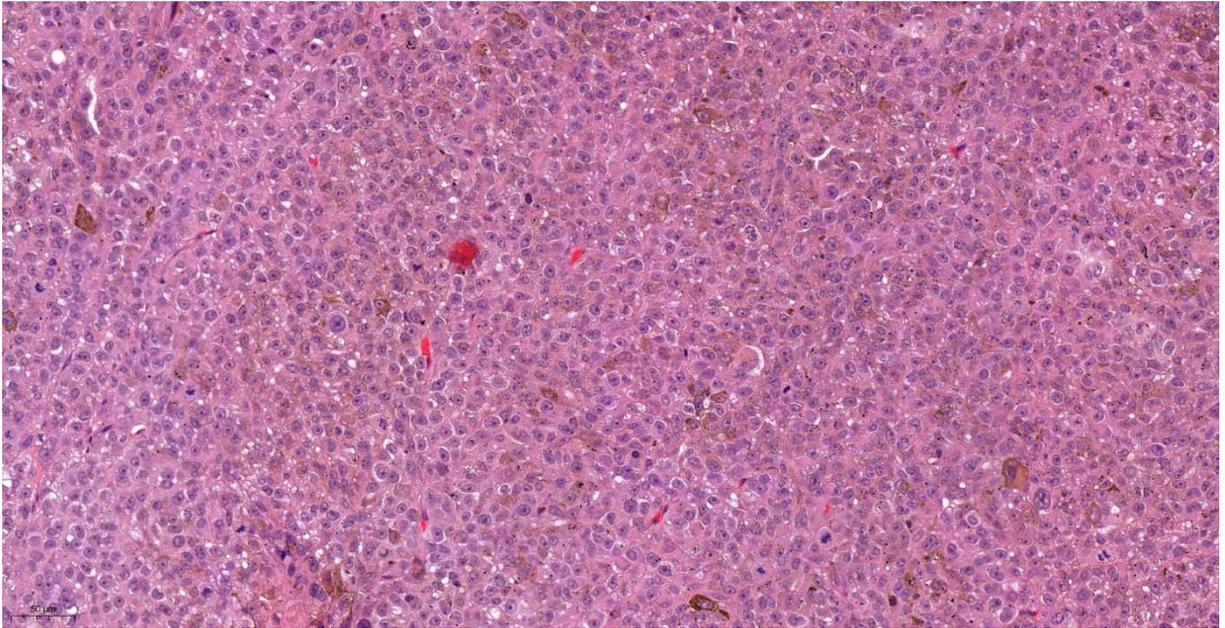
Time to reach 200mm<sup>3</sup> tumor size: 40 days

Time to reach 1000 mm<sup>3</sup> tumor size: about 60 days

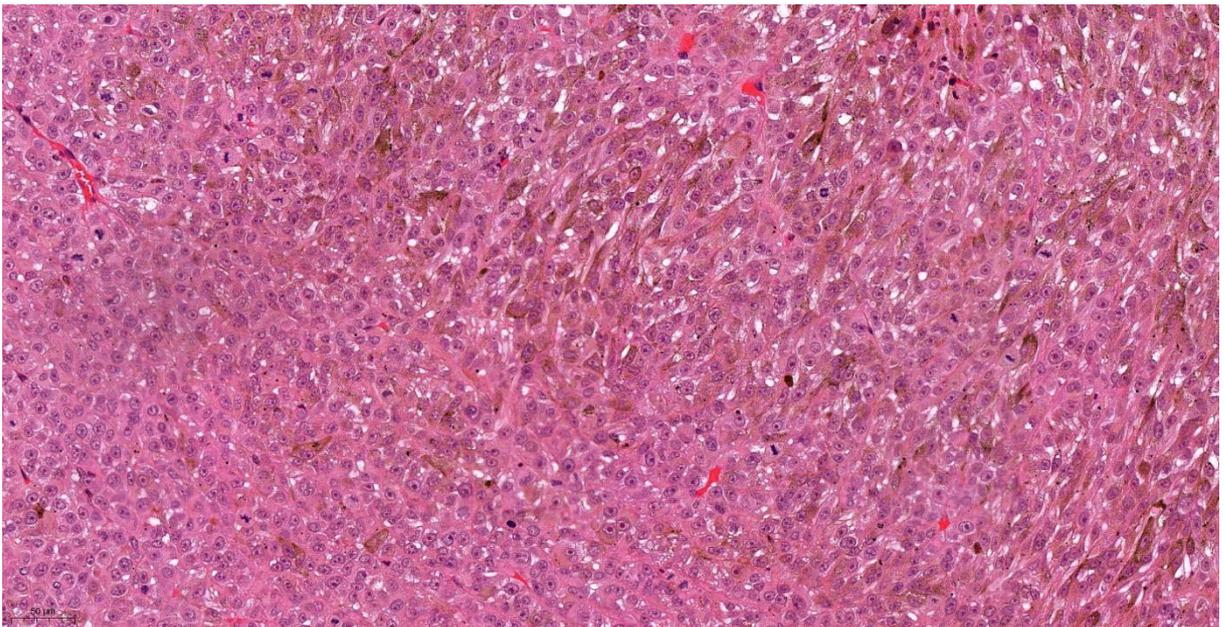


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-SUD94**

Tumor type/subtype: Malignant melanoma

Primary/metastatic:

Patient age: 73 years

Patient sex: Male

Smoking status:

Treatment-naïve:

## Genetic background

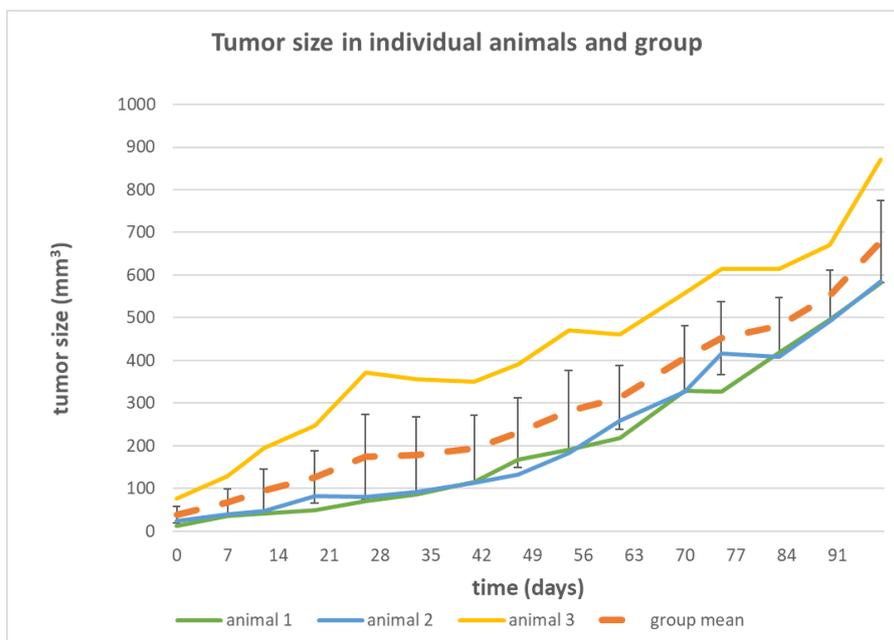
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 42 days

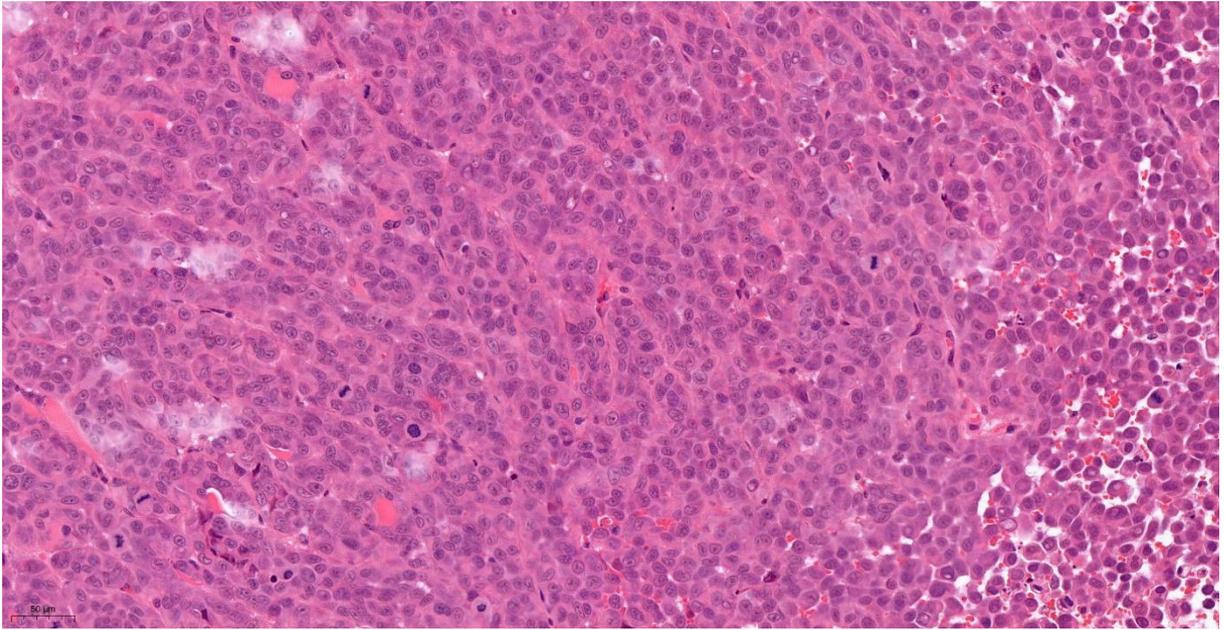
Time to reach 200mm<sup>3</sup> tumor size: 85 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown

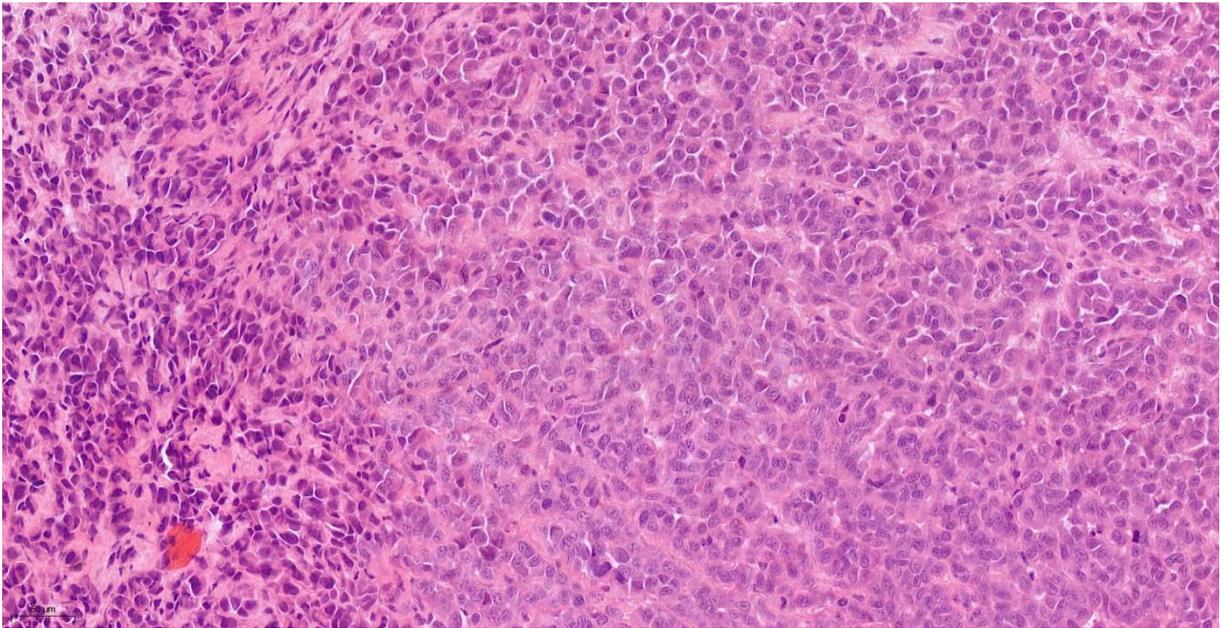


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-PR1**

Tumor type/subtype: Prostate adenocarcinoma

Primary/metastatic: primary

Patient age: 60 years

Patient sex: male

Smoking status: unknown

Treatment-naïve: yes

## Genetic background

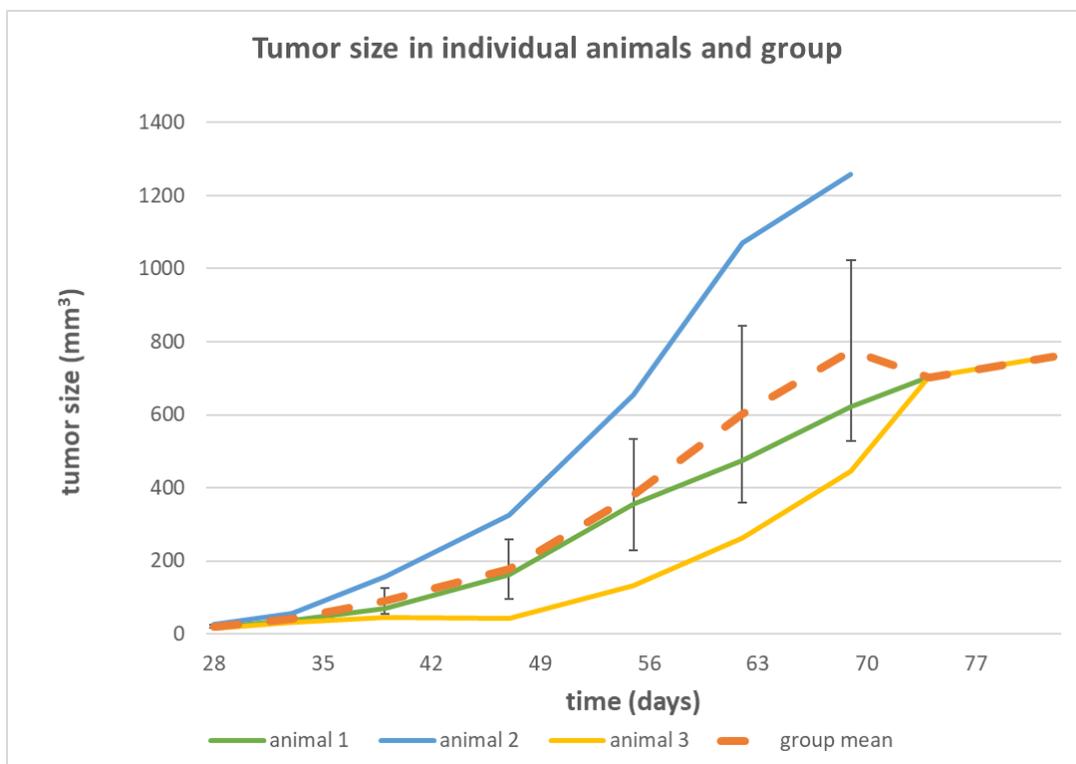
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 50 days

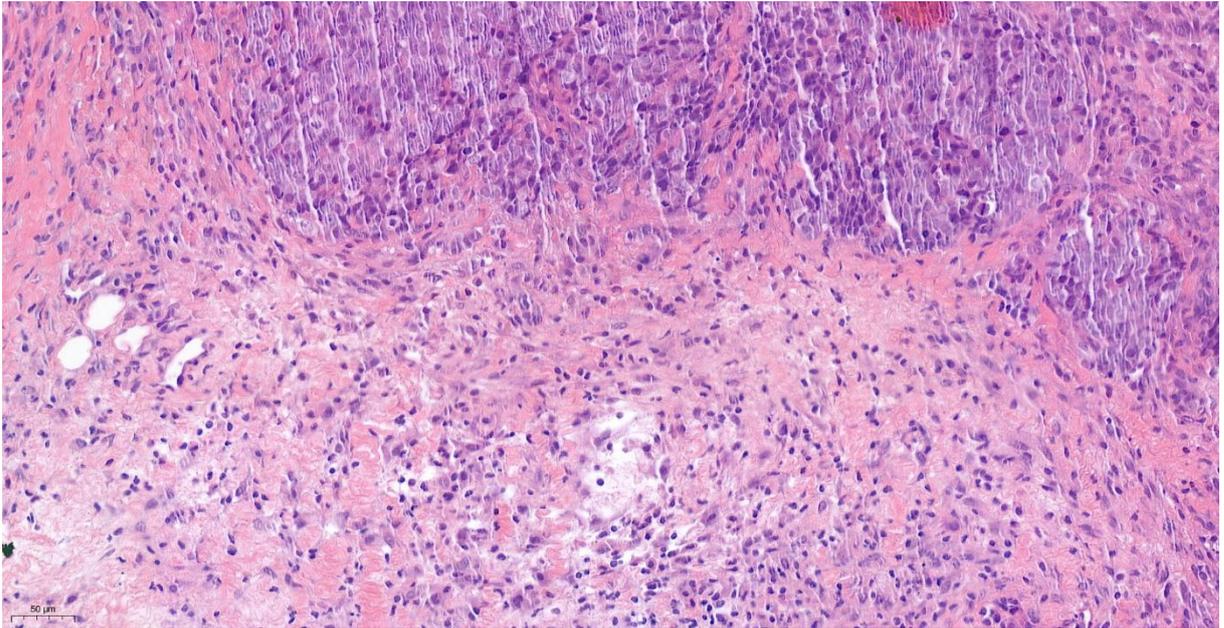
Time to reach 200mm<sup>3</sup> tumor size: 77 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown

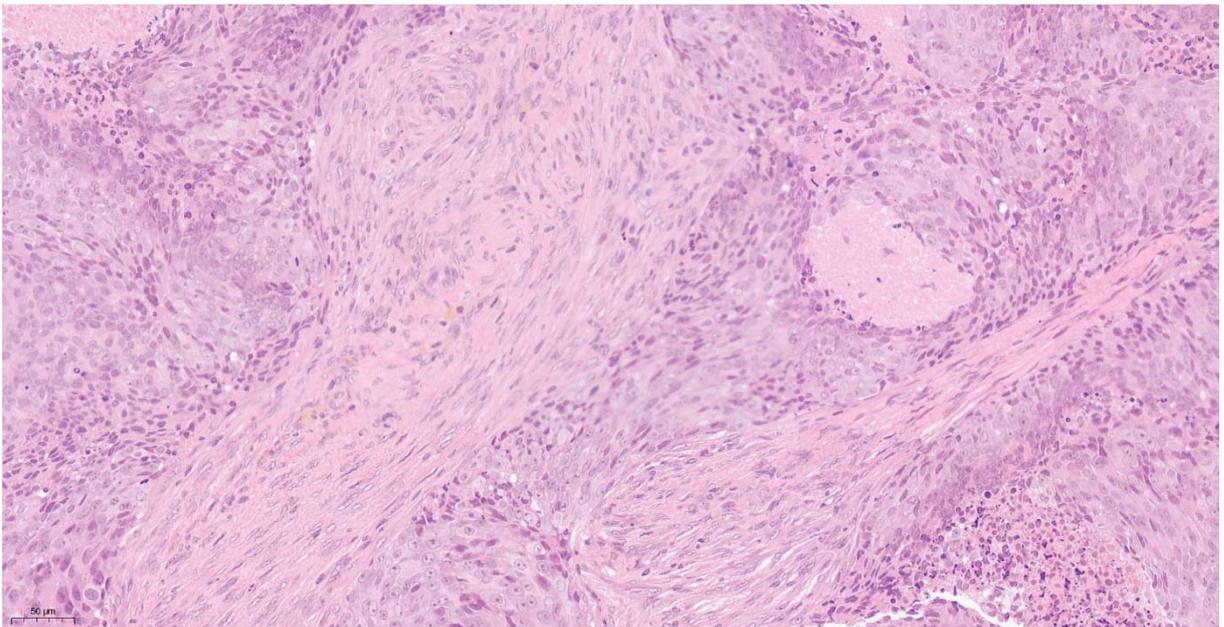


## Tumor PDX Morphology

Generation 1:



Generation 2:



## Model properties

Code: **KIN-TU6**

Tumor type/subtype: Non-small cell lung cancer/adenocarcinoma

Primary/metastatic: primary

Patient age: 73 years

Patient sex: male

Smoking status: unknown

Treatment-naïve: yes

## Genetic background

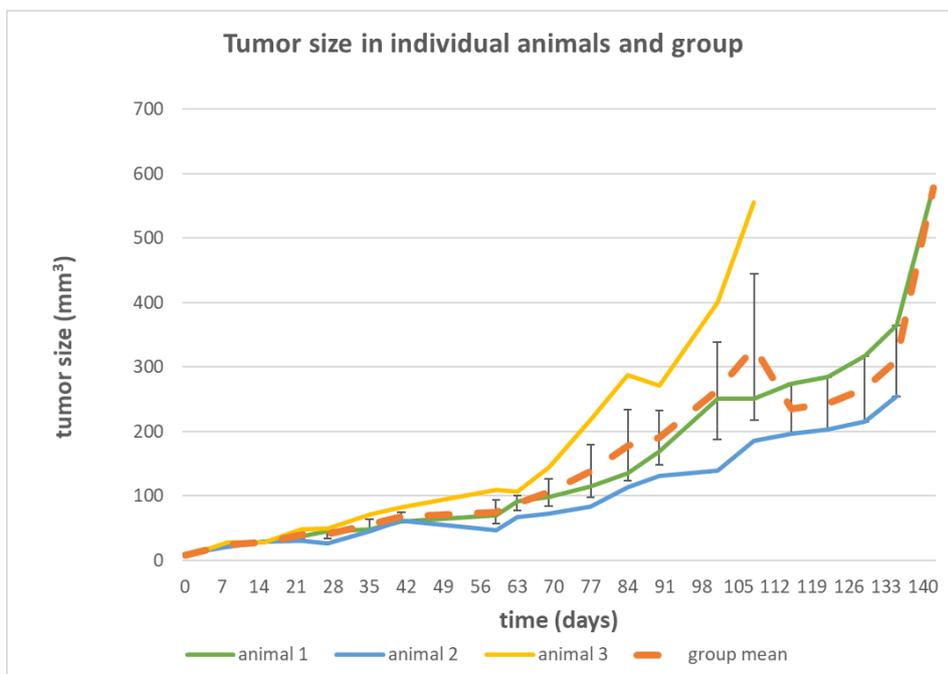
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

## Tumor PDX growth

Time to measurable tumor: 26 days

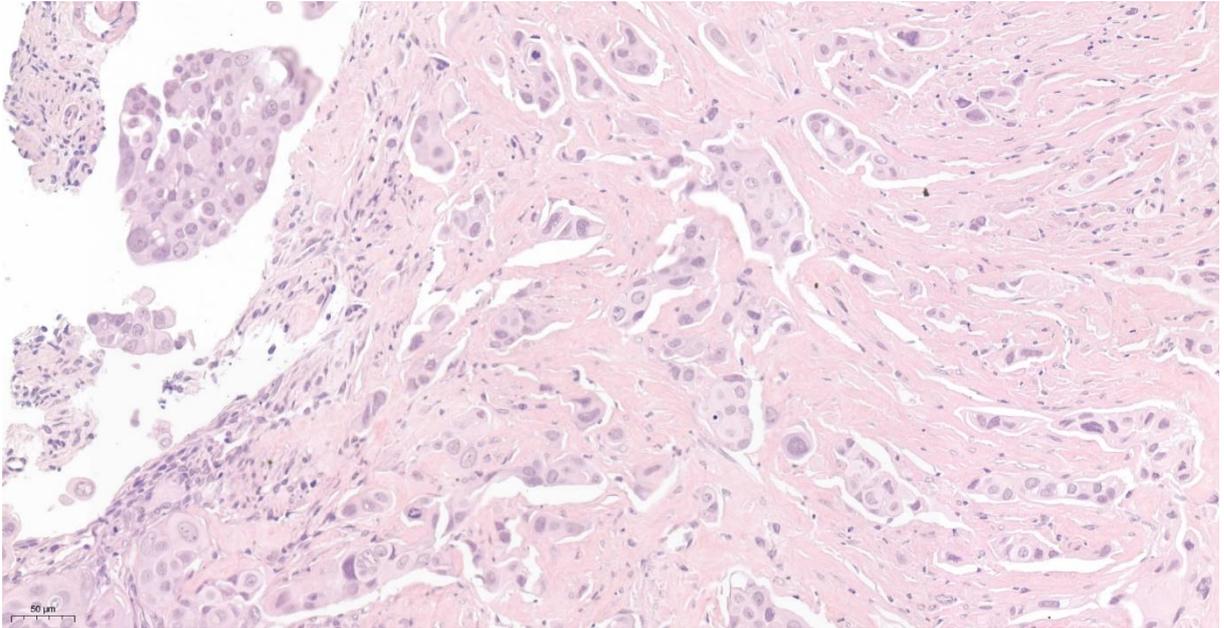
Time to reach 200mm<sup>3</sup> tumor size: 127 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown

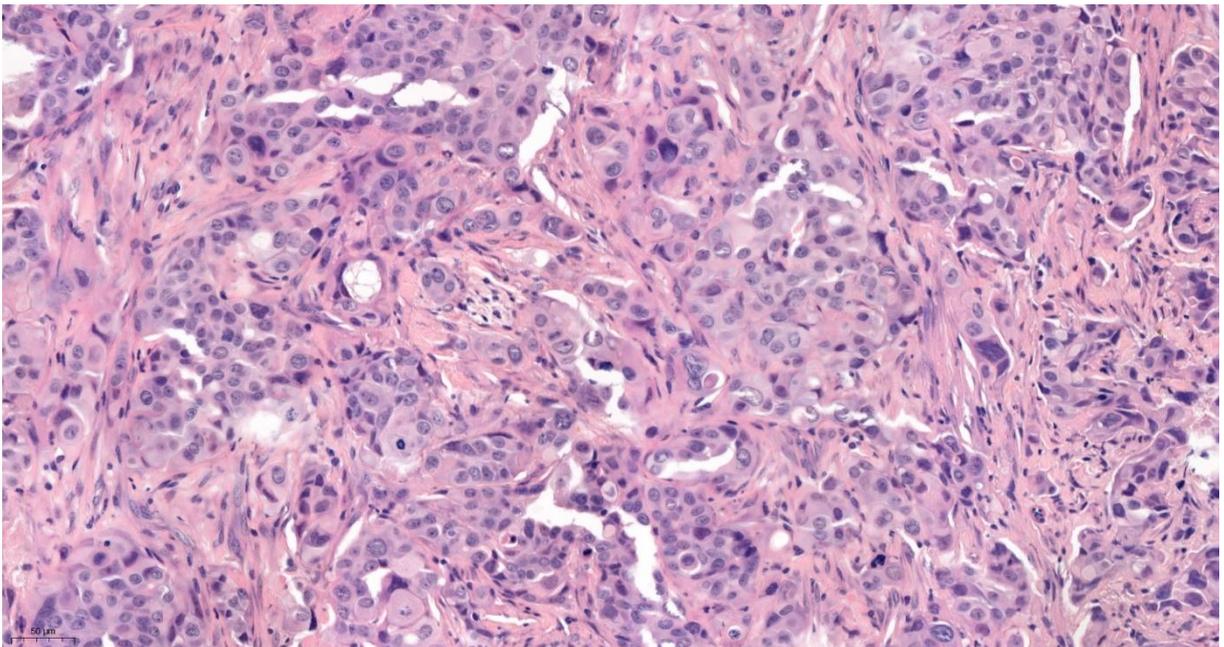


## Tumor PDX Morphology

Generation 1:



Generation 2:



## **Model properties**

Code: **KIN-VES2**

Tumor type/subtype: renal cell carcinoma

Primary/metastatic: primary

Patient age: 59 years

Patient sex: male

Smoking status: smoker

Treatment-naïve: yes

## **Genetic background**

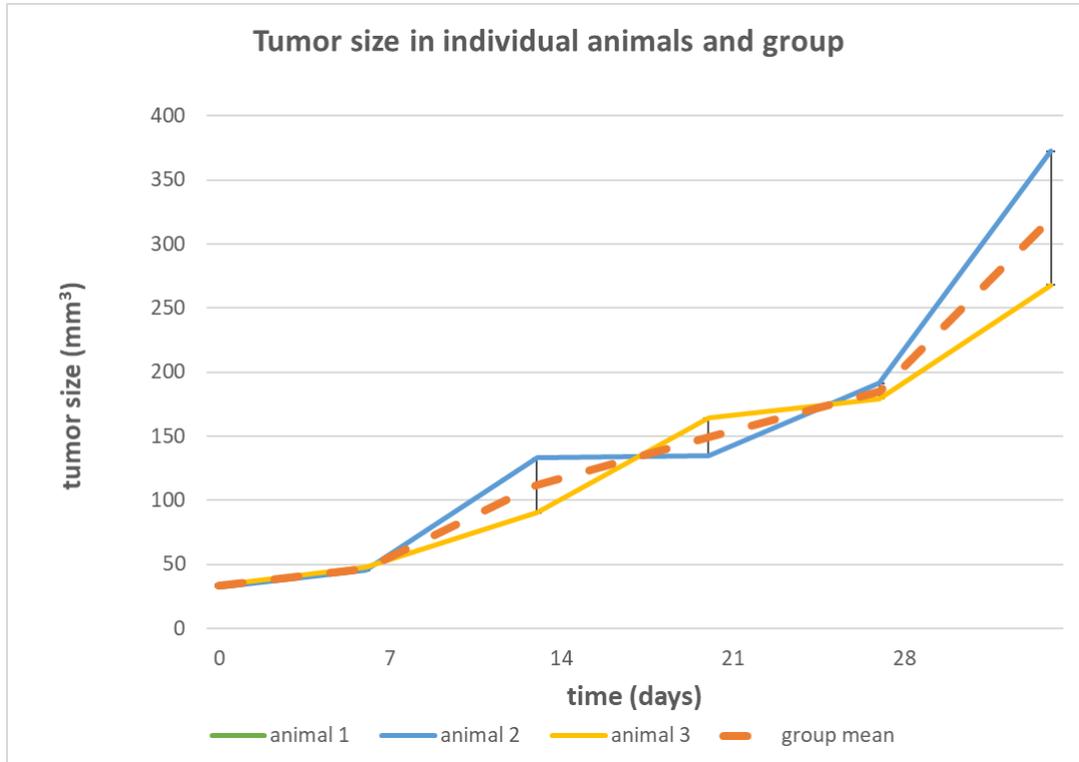
*(highlights from Illumina TruSight Oncology 500 platform genetic testing)*

### Tumor PDX growth

Time to measurable tumor: 18 days

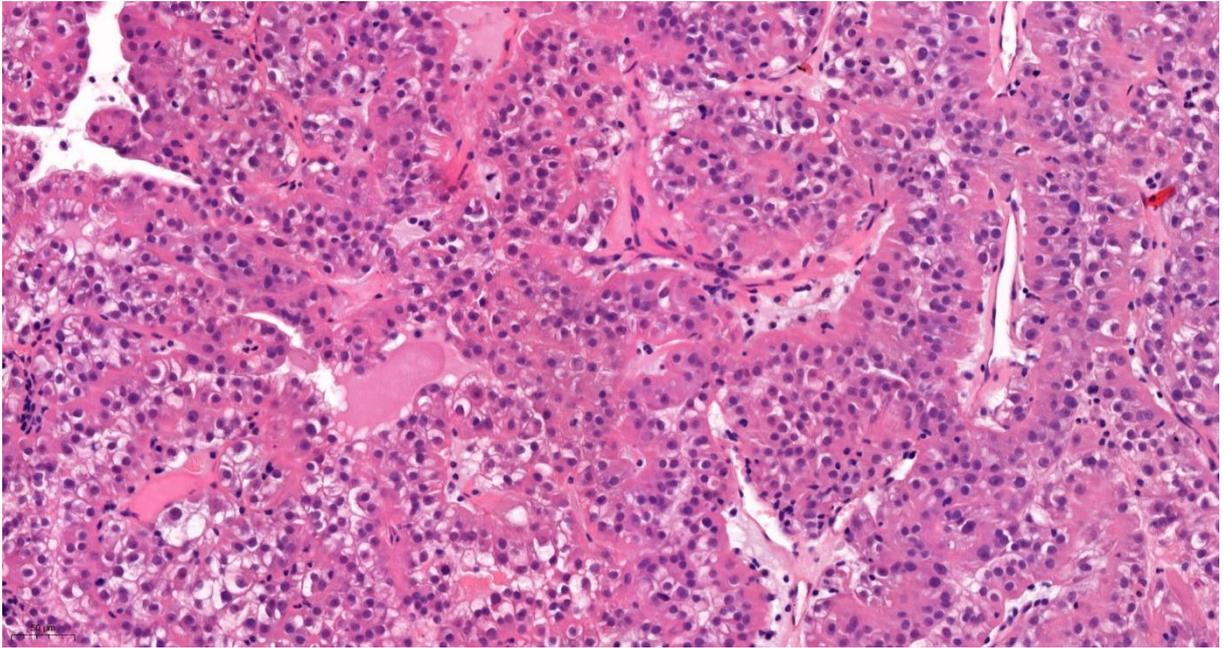
Time to reach 200mm<sup>3</sup> tumor size: 52 days

Time to reach 1000 mm<sup>3</sup> tumor size: unknown



## Tumor PDX Morphology

Generation 1:



Generation 2:

