

**Supplementary Table S1:** Animals lost during experiment.

<b>Model/passage</b>	<b>Treatment group</b>	<b>Day of experiment</b>	<b>Remark</b>
UZLX-GIST9p.4	Imatinib	7	Tumor exceeding acceptable volume
	Imatinib	10	Body weight loss (<80% of baseline)
	Dovitinib	8	Abnormal tumor growth (into peritoneal cavity)
	Dovitinib	21	Found dead, body weight loss (>80%)
UZLX-GIST2p.17	Binimetinib	13	Body weight loss (<80% of baseline)
	Binimetinib	20	Body weight loss (<80% of baseline)
GIST48	Control	3	Body weight loss (<80% of baseline)
	Imatinib	13	Body weight loss (<80% of baseline)