

**S3 Table. Primary cutaneous mast cell tumour RNAs used for gene expression profiling.****A. Metastasising MCTs.**

Dog ID.	Age of FFPE tumour at RNA isolation (Years)	RNA integrity (SINE Cq)
CB7 <sup>a</sup>	2	21.91
CB1	5	22.46
CCR1	4	23.09
ESS1 <sup>a</sup>	4	23.74
LR5	5	24.49
CB6	5	25.08
CB4	3	25.29
W1	4	25.44
B1	8	25.49
LR8	3	25.98
GS1	7	26.48
LR2	3	26.69
LR9	3	27.36
LR10	14	27.59
HV1	3	27.97
SBT1	3	27.99
LR3	4	28.87
GR1	2	29.18
D1	11	29.28
LR1	3	30.03

<sup>a</sup>'Outlier RNA samples' excluded prior to differential gene expression analysis

Prior to 'outlier array' exclusion

Mean and standard deviation	$4.80 \pm 2.99$	$26.22 \pm 2.28$
Median	4.00	26.23
Interquartile range	2.00	3.35

Following 'outlier array' exclusion

Mean and standard deviation	$5.00 \pm 3.07$	$26.60 \pm 2.07$
Median	4.00	26.59
Interquartile range	2.50	2.97

**B. Non-metastasising MCTs.**

Dog ID.	Age of FFPE tumour at RNA isolation (Years)	RNA integrity (SINE Cq)
LR6	4	21.88
CB3	9	23.46
MS2 <sup>a</sup>	7	24.27
W2	4	24.42
GR3	8	24.55
MS1	4	24.60
LR7	3	24.89
JRT1 <sup>a</sup>	13	25.06
B3	5	25.54
CB2	10	26.03
B2	10	26.12
B4	13	26.39
CB5	7	26.76
SBT2	10	26.86
GR2	12	27.10
P1 <sup>a</sup>	10	27.11
LR11 <sup>a</sup>	9	27.13
GR4	10	27.77
LR4	5	28.28
ETT1	11	29.63

<sup>a</sup>'Outlier RNA samples' excluded prior to differential gene expression analysis

Prior to 'outlier array' exclusion

Mean and standard deviation	$8.20 \pm 3.08$	$25.89 \pm 1.76$
Median	9.00	26.07
Interquartile range	5.00	2.54

Following 'outlier array' exclusion

Mean and standard deviation	$7.81 \pm 3.15$	$25.89 \pm 1.86$
Median	8.50	26.07
Interquartile range	5.75	2.48