

## SUPPLEMENTARY MATERIALS

**TABLE S1. Model generation for the effect of clinical variables on survival stratified by clinical stage.**

Parameter	Groups	No.	MST †	95%CI‡	Global model Strata = Clinical stage				Optimised model Strata = Clinical stage			
					B§¶	HR«	95%CI	p¶	B§¶	HR«	95%CI	p»
Tumour size	≤2 cm  >2 cm	35  42	678  360	336–  1020  241–479	0.649	1.914	0.952–  3.849	0.091	0.675	1.963	1.013–  3.806	0.048*
Lymph node size	≤1.6 cm  >1.6–≤5 cm  >5 cm	39  24  18	631  493  135	312–950  442–544  8–258	1.058	2.879	1.549–  5.352	0.001	1.116	3.053	1.712–  5.446	0.001**
Surgery	No  Yes	18  63	137  531	0–528  389–673	-1.023	0.359	0.166–  0.776	0.025	-1.103	0.332	0.161–  0.685	0.004**
Radiotherapy	No  yes	73  8	452  995	378–526  686–1304	-1.208	0.299	0.092–  0.967	0.018	-1.18	0.307	0.099–  0.949	0.014*
Medical therapy	No  Yes	49  32	452  461	324–580  416–506	-0.043	0.958	0.503–  1.823	0.906	eliminated			
Calcium status	Normal  Increased	58  19	497  286	412–582  145–427	0.341	1.406	0.642–  3.079	0.482	eliminated			

†Median survival time.

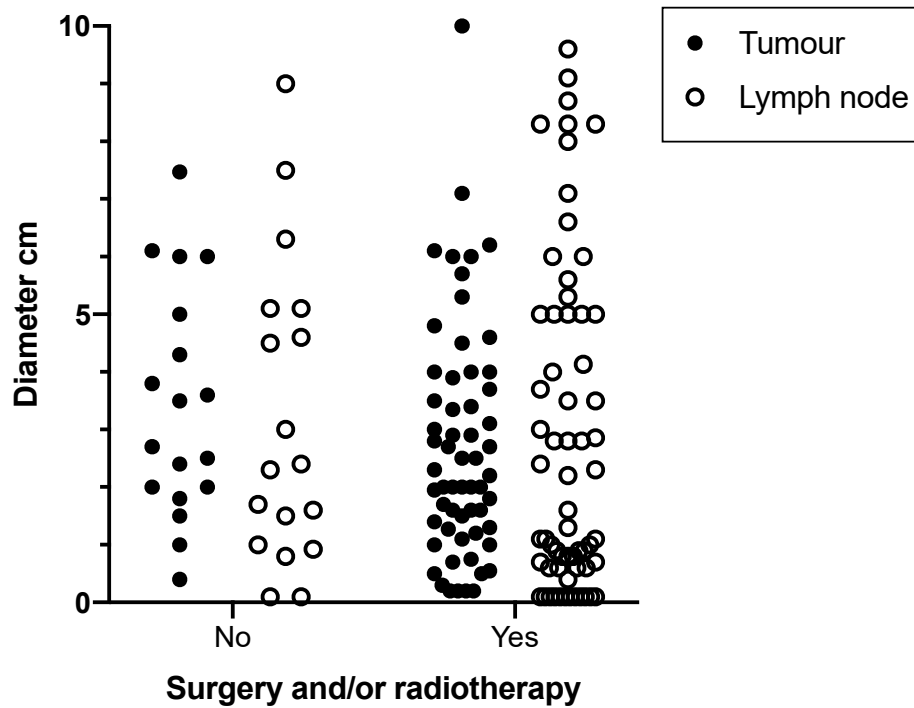
‡95% confidence interval.

§B coefficient of Cox regression.

¶Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

«Hazard ratio.

»based on 999 bootstrap samples.



**FIGURE S1. Tumour and lymph node size stratified by treatment received.**

**TABLE S2. Log-rank and Cox univariate analysis of the clinical algorithm for survival.**

Score	Number	MST†	95%CI‡	Log-rank p	B§¶	HR«	95%CI‡	Cox p¶
0	15	1072	668–1476	<0.0001 ***	1.351	3.86	2.368–6.29	0.001**
1	29	590	372–808					

2 or more	35	237	22–452					
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†Median survival time.

‡95% confidence interval.

§B coefficient of Cox regression.

¶Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

«Hazard ratio.

**TABLE S3. Model generation for the effect of clinical variables on progression-free interval.**

Parameter	Groups	No.	MPFI †	95%CI ‡	Global model				Optimised model			
					B§¶	HR«	95%CI ‡	p¶	B§¶	HR«	95%CI ‡	p<
Tumour size	≤1.3 cm	9	445	188–702	1.947	7.008	2.25–	0.006	1.783	5.948	2.062–	0.006
	>1.3 cm	26	230	164–296			21.826				17.161	**
Distant metastasis	No »	29	252	223–281	1.578	4.844	1.773–	0.002	1.742	5.708	2.093–	0.001
	Yes	8	133	23–243			13.236				15.567	**
Lymph node size	≤3.8 cm	27	230	223–281	-0.763	0.466	0.173–	0.123	-0.954	0.385	0.155–	0.053
	>3.8 cm	10	258	23–243			1.259				0.96	
Calcium status	Normal	26	239	224–254	-0.525	0.592	0.203–	0.338				
	Increased	8	275	174–376			1.723					

†Median first progression-free interval

‡95% confidence interval.

§B coefficient of Cox regression.

¶Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

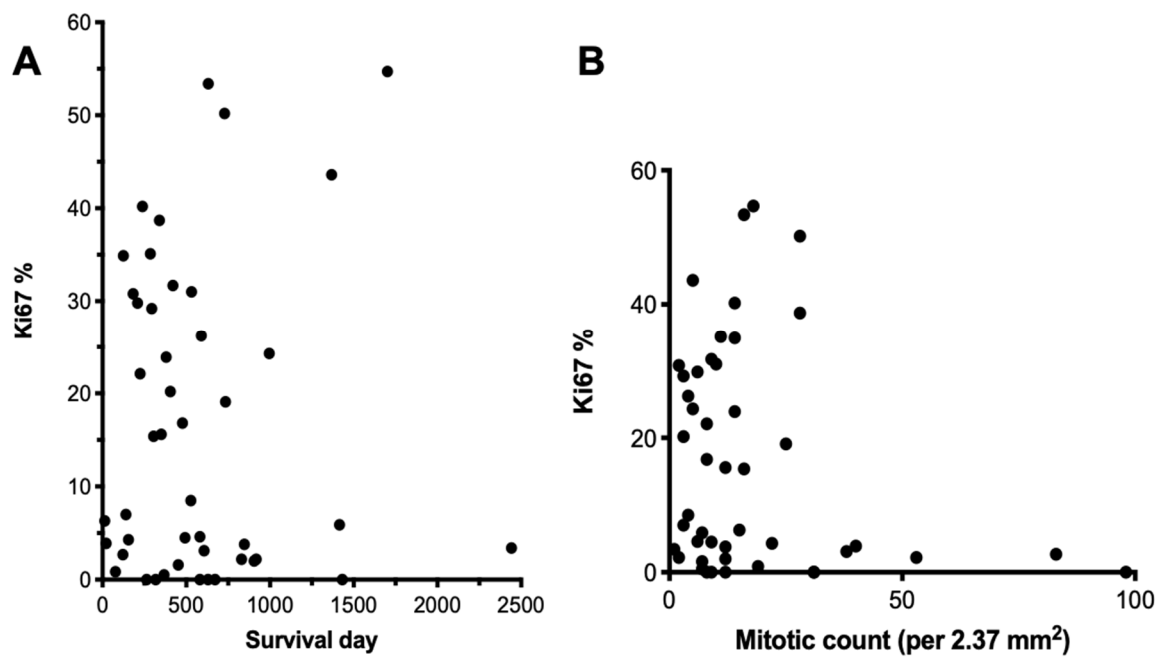
«Hazard ratio.

»Locoregional spread or primary disease only.

‹Based on 998 samples.

**FIGURE S2. (a) Ki67% positive cells of primary AGASAC tumours from 46 dogs. (b)**

**Relationship between the Ki67% and mitotic count of individual primary tumours.**



**TABLE S4. Model generation for histological variables effect upon survival.**

Parameter	Groups	No.	MST †	95%CI‡	Global model				Optimised model			
					B§¶	HR«	95%CI ‡	p¶	B§¶	HR«	95%CI‡	p¶
Necrosis	None	28	831	498–1163	1.094	2.987	1.291– 6.913	0.014	1.093	2.984	1.336– 6.662	0.008**
	Present	21	421	268–574								

Predominant histological pattern	Non-solid	26	631	85–1177	0.986	2.68	1.177–	0.068	0.967	2.63	1.194–	0.016*
	Solid	23	452	179–725			6.103				5.793	
Vascular invasion	None	31	831	433–1229	1.252	3.497	1.408–	0.011	1.027	2.794	1.251–	0.012*
	Present	18	367	233–501			8.683				6.242	
Ki67%	≤6.1	21	607	178–1036	0.382	1.465	0.623–	0.445	eliminated			
	>6.1	25	590	419–761			3.443					

†Median survival time.

‡95% confidence interval.

§B coefficient of Cox regression.

¶Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

«Hazard ratio.

**TABLE S5. Log-rank and Cox univariate analysis of the histopathological prognostic algorithm.**

Score	No.	MST †	95%CI‡	Log-rank p	B§¶	HR«	95%CI‡	Cox p¶
Score 0–1	29	906	374–1438	<0.0001 ****	1.567	4.792	2.127–10.796	0.001**
Score 2 or more	20	318	224–412					

†Median survival time.

‡95% confidence interval.

§B coefficient of Cox regression.

¶Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples.

«Hazard ratio.