

Routine neutering complication rates

This document shows results of submitted data from 3302 routine surgical cases in 2019. You can use the results from this group data to compare with the results from your practice.

Total Results Submitted

The following represent the total and percentage representation of each of the 6 outcome groups:

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	364	11.02%	11.02%
Abnormal requiring medical treatment	241	7.30%	18.32%
Abnormal requiring surgical intervention	12	0.36%	18.69%
Fatality of animal	3	0.09%	18.78%
Lost to Follow-up	299	9.06%	27.83%
No abnormality present	2383	72.17%	100.00%
Total	3302	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	10.00%	12.14%
Abnormal requiring medical treatment	6.46%	8.24%
Abnormal requiring surgical intervention	0.21%	0.63%
Fatality of animal	0.03%	0.27%
Lost to Follow-up	8.12%	10.08%
No abnormality present	70.61%	73.67%

What does this mean?

This means if we re-sample the group 20 times we can be sure of getting a result for each group somewhere between the two stated figures in 19 of those samples. I.e. we can be 95% confident that the true incidence of "lost to follow-ups" in this sample is between 8.12% & 10.08%.

Overall complication rate

The actual outcome of the cases that are "lost to follow-up" is however unknown. Although the percentage level overall is important, we would be wrong to include them in the complication rate figures.

All the following results have had lost to follow-ups removed from the calculations. The following table shows the overall results of post-operative complications submitted to date.

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	364	12.12%	12.12%
Abnormal requiring medical treatment	241	8.03%	20.15%
Abnormal requiring surgical intervention	12	0.40%	20.55%
Fatality of animal	3	0.10%	20.65%
No abnormality present	2383	79.35%	100.00%
Total	3003	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	11.00%	13.34%
Abnormal requiring medical treatment	7.11%	9.05%
Abnormal requiring surgical intervention	0.23%	0.70%
Fatality of animal	0.03%	0.29%
No abnormality present	77.87%	80.76%

So, for example we can be 95% confident that the true level of abnormality but no treatment necessary is between 11.00% and 13.34%.

Specific procedure complication rate



Cat Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	22	4.89%	4.89%
Abnormal requiring medical treatment	5	1.11%	6.00%
Abnormal requiring surgical intervention	1	0.22%	6.22%
Fatality of animal	0	0.00%	6.22%
No abnormality present	422	93.78%	100.00%
Total	450	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	3.25%	7.29%
Abnormal requiring medical treatment	0.48%	2.57%
Abnormal requiring surgical intervention	0.04%	1.25%
No abnormality present	91.15%	95.66%

Cat Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	77	12.83%	12.83%
Abnormal requiring medical treatment	25	4.17%	17.00%
Abnormal requiring surgical intervention	4	0.67%	17.67%
Fatality of animal	0	0.00%	17.67%
No abnormality present	494	82.33%	100.00%
Total	600	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	10.39%	15.75%
Abnormal requiring medical treatment	2.84%	6.08%
Abnormal requiring surgical intervention	0.26%	1.70%
No abnormality present	79.08%	85.18%



Dog Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	120	13.94%	13.94%
Abnormal requiring medical treatment	100	11.61%	25.55%
Abnormal requiring surgical intervention	1	0.12%	25.67%
Fatality of animal	0	0.00%	25.67%
No abnormality present	640	74.33%	100.00%
Total	861	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	11.78%	16.41%
Abnormal requiring medical treatment	9.64%	13.93%
Abnormal requiring surgical intervention	0.02%	0.65%
No abnormality present	72.36%	77.14%

Bitch Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	134	14.14%	14.11%
Abnormal requiring medical treatment	94	9.92%	24.05%
Abnormal requiring surgical intervention	6	0.63%	24.68%
Fatality of animal	1	0.11%	24.79%
No abnormality present	713	75.21%	100.00%
Total	948	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	12.06%	16.50%
Abnormal requiring medical treatment	8.17%	11.98%
Abnormal requiring surgical intervention	0.29%	1.37%
Fatality of animal	0.02%	0.60%
No abnormality present	72.36%	77.85%



Rabbit Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	7	8.54%	8.54%
Abnormal requiring medical treatment	12	14.63%	23.17%
Abnormal requiring surgical intervention	0	0.00%	23.17%
Fatality of animal	1	1.22%	24.39%
No abnormality present	62	75.61%	100.00%
Total	82	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	3.50%	16.80%
Abnormal requiring medical treatment	7.80%	24.17%
Fatality of animal	0.03%	6.61%
No abnormality present	64.88%	84.42%

Rabbit Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	4	6.45%	6.45%
Abnormal requiring medical treatment	5	8.06%	14.52%
Abnormal requiring surgical intervention	0	0.00%	14.52%
Fatality of animal	1	1.61%	16.13%
No abnormality present	52	83.87%	100.00%
Total	62	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	1.79%	15.70%
Abnormal requiring medical treatment	2.67%	17.83%
Fatality of animal	0.04%	8.66%
No abnormality present	72.33%	91.98%