

Data submitted to the National Audit for Small Animal Neutering has been considerably lower during 2020 than in previous years. This is likely due to the COVID-19 pandemic affecting the way practices have been running. Due to this reduction in data, the confidence intervals are larger than in previous years. Confidence intervals relate to the confidence that the true parameter is within the proposed range. For example, in 2019 we were 95% confident that the true incidence of ‘lost to follow ups’ was between 8.12% and 10.08%. For the 2020 data, we are 95% confident that the true incidence of ‘lost to follow ups’ is between 2.37% and 6.31%.

The vetAUDIT group would like to thank all practices that have submitted data. Without your participation, setting benchmarks would not be possible. We are still accepting data for 2020 procedures. Data can be submitted anonymously. However, if you require certification of participation, your practice name is required. All data is anonymised before sharing. If you haven’t yet shared your data, you can do so at <https://vetaudit.rcvsk.org/submit-data>.

Routine neutering complication rates

This document shows results of submitted data from 386 routine surgical cases in 2020. 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	30	7.77%	7.77%
Abnormal requiring medical treatment	35	9.07%	16.84%
Abnormal requiring surgical intervention	1	0.26%	17.10%
Fatality of animal	0	0.00%	17.10%
Lost to Follow-up	15	3.89%	20.98%
No abnormality present	305	79.02%	100.00%
Total	386	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	5.50%	10.88%
Abnormal requiring medical treatment	6.59%	12.35%
Abnormal requiring surgical intervention	0.05%	1.45%
Lost to Follow-up	2.37%	6.31%
No abnormality present	74.68%	82.78%

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 2.37% & 6.31%.

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	30	8.09%	8.09%
Abnormal requiring medical treatment	35	9.43%	17.52%
Abnormal requiring surgical intervention	1	0.27%	17.79%
Fatality of animal	0	0.00%	17.79%
No abnormality present	305	82.21%	100.00%
Total	371	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	5.72%	11.31%
Abnormal requiring medical treatment	6.86%	12.84%
Abnormal requiring surgical intervention	0.05%	1.51%
No abnormality present	77.99%	85.77%

So, for example we can be 95% confident that the true level of abnormality but no treatment necessary is between 5.72% and 11.31%.

Specific procedure complication rate



Cat Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	2	2.47%	2.47%
Abnormal requiring medical treatment	1	1.23%	1.23%
Abnormal requiring surgical intervention	0	0.00%	1.23%
Fatality of animal	0	0.00%	1.23%
No abnormality present	78	96.30%	100.00%
Total	81	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	0.30%	8.64%
Abnormal requiring medical treatment	0.03%	6.69%
No abnormality present	89.56%	99.23%

Cat Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	4	4.82%	4.82%
Abnormal requiring medical treatment	2	2.41%	7.23%
Abnormal requiring surgical intervention	1	1.20%	8.43%
Fatality of animal	0	0.00%	8.43%
No abnormality present	76	91.57%	100.00%
Total	83	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	1.33%	11.88%
Abnormal requiring medical treatment	0.29%	8.43%
Abnormal requiring surgical intervention	0.03%	6.53%
No abnormality present	83.39%	96.54%



Dog Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	10	11.24%	11.24%
Abnormal requiring medical treatment	10	11.24%	22.47%
Abnormal requiring surgical intervention	0	0.00%	22.47%
Fatality of animal	0	0.00%	22.47%
No abnormality present	69	77.53%	100.00%
Total	89	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	5.52%	19.69%
Abnormal requiring medical treatment	5.52%	19.69%
No abnormality present	67.45%	85.70%

Bitch Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	11	11.11%	11.11%
Abnormal requiring medical treatment	20	20.20%	31.31%
Abnormal requiring surgical intervention	0	0.00%	31.31%
Fatality of animal	0	0.00%	31.31%
No abnormality present	68	68.9%	100.00%
Total	99	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	5.68%	19.01%
Abnormal requiring medical treatment	12.80%	29.46%
No abnormality present	58.59%	77.64%



Rabbit Castrate

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	3	17.65%	17.65%
Abnormal requiring medical treatment	1	5.88%	23.53%
Abnormal requiring surgical intervention	0	0.00%	23.53%
Fatality of animal	0	0.00%	23.53%
No abnormality present	13	76.47%	100.00%
Total	17	100.00%	100.00%

95% Conf Limits		
Abnormal but no treatment necessary	3.80%	43.43%
Abnormal requiring medical treatment	0.15%	28.69%
No abnormality present	50.10%	93.19%

Rabbit Spay

Outcome	Frequency	Percent	Cum Percent
Abnormal but no treatment necessary	0	0.00%	0.00%
Abnormal requiring medical treatment	1	50.00%	50.00%
Abnormal requiring surgical intervention	0	0.00%	50.00%
Fatality of animal	0	0.00%	50.00%
No abnormality present	1	50.00%	100.00%
Total	2	100.00%	100.00%

95% Conf Limits		
Abnormal requiring medical treatment	1.26%	98.74%
No abnormality present	1.26%	98.74%