

RCVS KNOWLEDGE
NATIONAL AUDIT FOR
SMALL ANIMAL NEUTERING
REPORT 2023




RCVS Knowledge is an independent charity sitting at the heart of the veterinary professions with a mission to advance the quality of care for the benefit of animals, the public and society.

To meet its goals, it supports and collaborates with veterinary teams on the ground and in practice. Influences policy. Engages with educators and other organisations.

It translates and disseminates the latest research from across the globe. Fosters approaches to shared learning with training and tools. Logs and tracks the evolving professions, underpinned by the veterinary archive.

Registered address:
First Floor 10 Queen Street Place
London EC4R 1BE

Correspondence address:
3 Waterhouse Square, 138-142 Holborn
London EC1N 2SW

020 7202 0721
rcvsknowledge.org 
info@rcvsknowledge.org

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
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This report uses data from 2nd January 2005 to 31st December 2023.

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NATIONAL AUDIT FOR SMALL ANIMAL NEUTERING REPORT 2023

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INTRODUCTION

The National Audit for Small Animal Neutering (NASAN) is a simple audit that allows veterinary teams to measure post-operative complication rates for the neutering of small animals.

The free-to-download audit template allows you to submit data for your dog castrates, bitch spays (both routine and laparoscopic), cat spays and castrates, and rabbit spays and castrates.

Your post-operative outcomes can be selected from six main groups:

- Lost to follow-up: patients that do not return to the practice, when a repeat check-up was expected.
- No abnormality present: healed as normal.
- Abnormal but no treatment necessary: abnormal healing that resolved without any treatment.
- Abnormal requiring medical treatment: abnormal healing that required extra treatment, on top of your routinely prescribed postoperative treatment.
- Abnormal requiring surgical intervention: abnormal healing that required surgical intervention.
- Fatality: The patient died, either in the peri- or post-operative period.

The audit template combines practice data, and displays overall results, but also breaks down the analysis by complication and species.

By collecting this donated data, NASAN provides a system to measure national benchmarks for the outcomes of canine, feline and rabbit spays and castrations. The data is combined, analysed manually on an annual basis, and made publicly

available to allow practices to compare their rates against the national benchmark.

Benchmarking

Benchmarking is a Quality Improvement (QI) tool that can be used to help improve clinical outcomes and quality of care.

It is a comparison of clinical audit results against other audit results (the benchmark), whether they are from clinical practice or a national audit.

Comparing audit results against the NASAN allows teams to get a clearer picture of what is possible by making comparisons against a range of other practices that perhaps have different caseloads, use different protocols, and have different practice structures.

By learning from other ways of working, and making changes, care can be improved for our patients.

Statistical Significance

We have used the Wilson method to calculate confidence intervals for each result, indicating 95% confidence that our results are representative of the population.

If we re-sampled the group 20 times, we would be 95% sure that the result would continue to fall between this range.

For example, if we recaptured the data for all patients included in the audit, we would be 95% certain that the result for "Lost to follow up" would fall between 12.38% and 12.90%.

Acknowledgements

RCVS Knowledge would like to thank all practices that have submitted data.

Your participation contributes to strengthening the body of evidence and makes standards-setting possible.

OVERVIEW OF SUBMITTED RESULTS

The following is an overview of all the submitted results, with the percentage shown for each of the six outcome groups.

This data is comprised of 63, 276 procedures from the UK, performed and submitted from 2005 to 2023.

70.84%

No Abnormality Present

Wilson 95%

Confidence Limit 70.49% - 71.19%

12.64%

Lost to Follow-Up

Wilson 95%

Confidence Limit 12.38% - 12.90%

8.79%

Abnormal but no Treatment Necessary

Wilson 95%

Confidence Limit 8.57% - 9.01%

6.80%

Abnormal Requiring Medical Treatment

Wilson 95%

Confidence Limit 6.61% - 7.00%

0.84%

Abnormal Requiring Surgical Intervention

Wilson 95%

Confidence Limit 0.77% - 0.91%

0.09%

Fatality

Wilson 95%

Confidence Limit 0.07% - 0.12%

OVERALL COMPLICATION RATE

These percentages are based on 55,281 total procedures performed and submitted between 2005 and 2023. This figure excludes those lost to follow up as,

although these patients are important, we do not know what the outcome of their procedure was.

81.09%

No Abnormality Present

Wilson 95%

Confidence Limit 80.76% - 81.41%

10.06%

Abnormal but no Treatment Necessary

Wilson 95%

Confidence Limit 9.82% - 10.32%

7.78%

Abnormal Requiring Medical Treatment

Wilson 95%

Confidence Limit 7.56% - 8.01%

0.96%

Abnormal Requiring Surgical Intervention

Wilson 95%

Confidence Limit 0.88% - 1.05%

0.10%

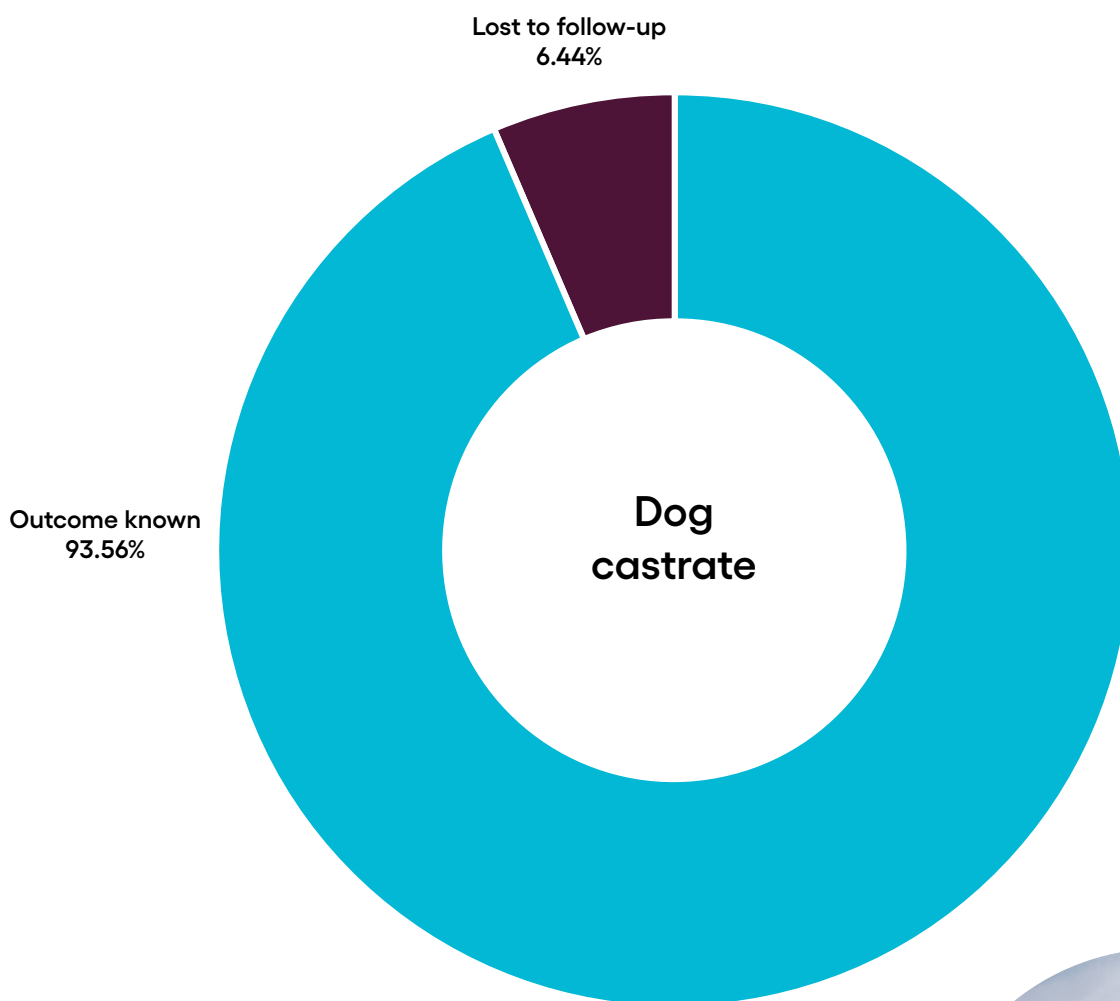
Fatality

Wilson 95%

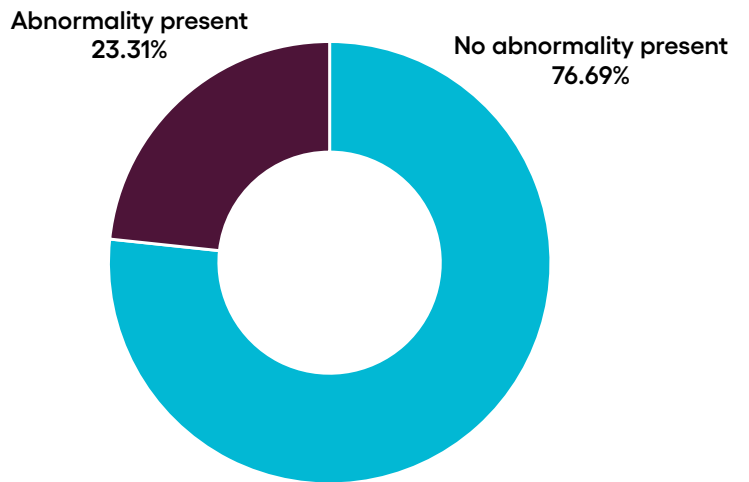
Confidence Limit 0.08% - 0.14%

DOG CASTRATE

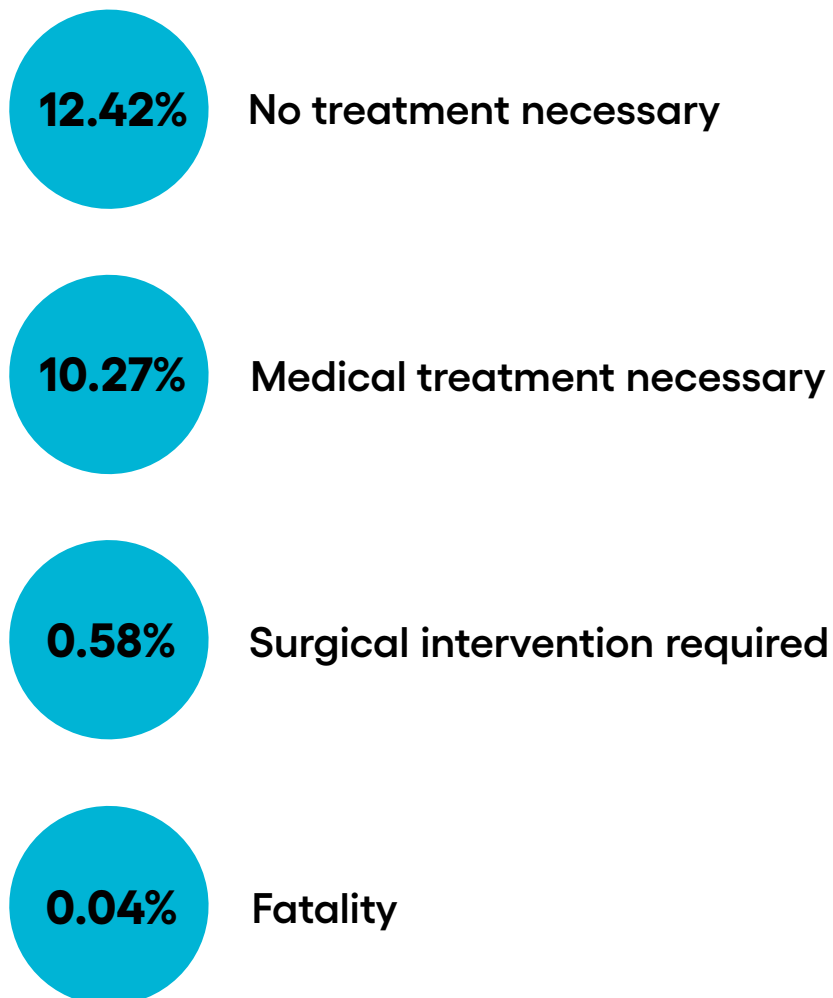
The results below are from the donated data of 17,056 dog castrates.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

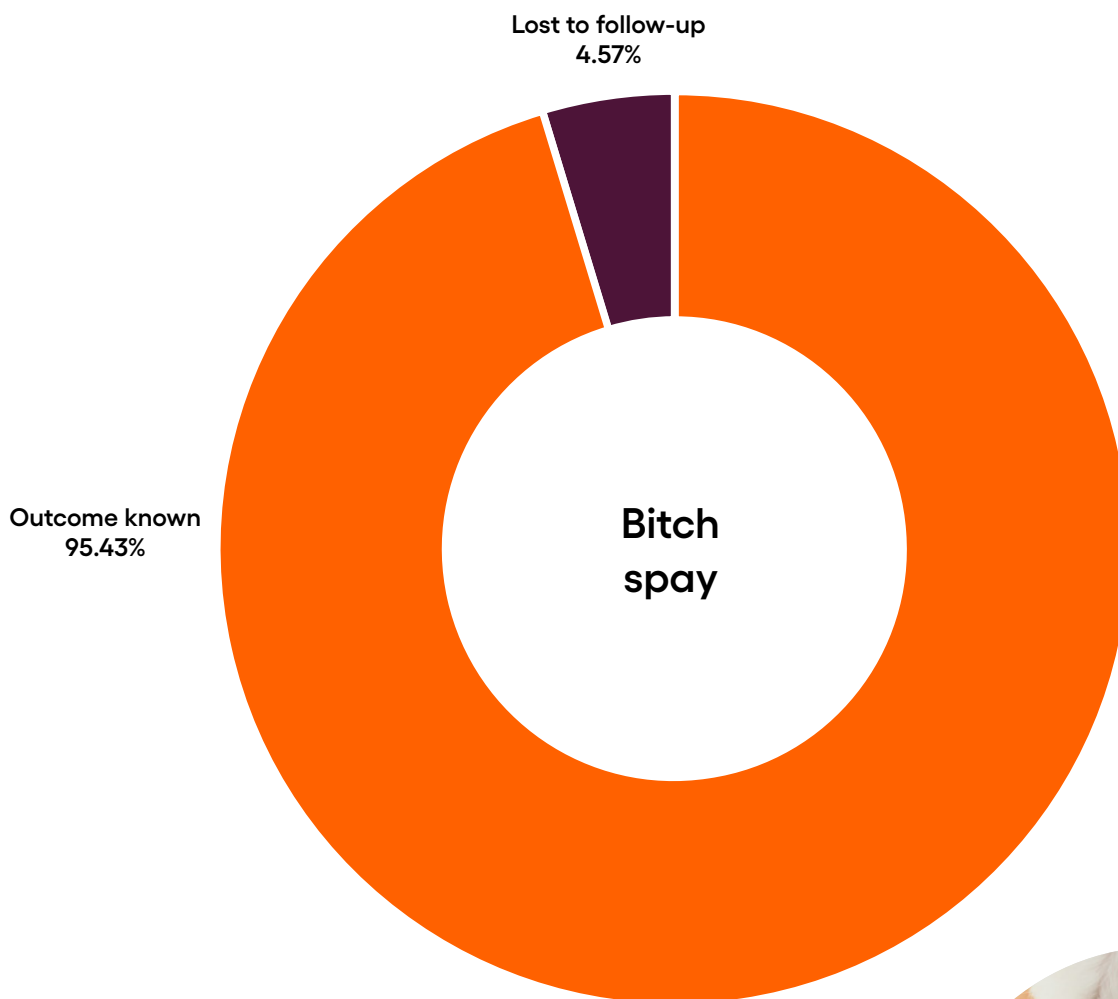


Outcomes of procedures where abnormalities were present:

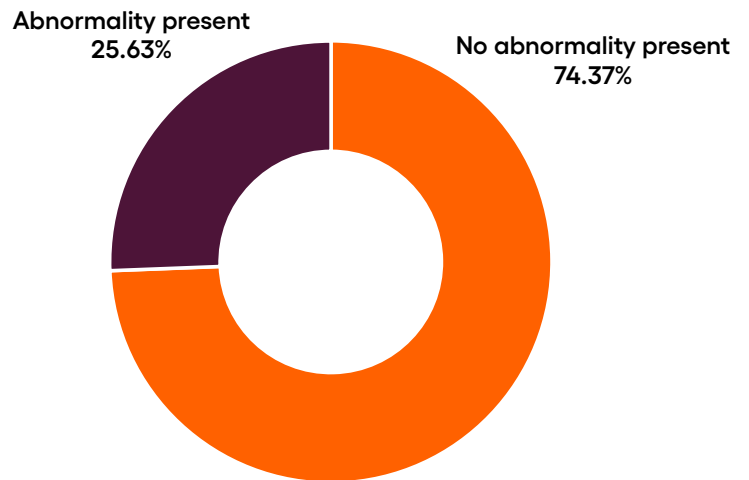


BITCH SPAY

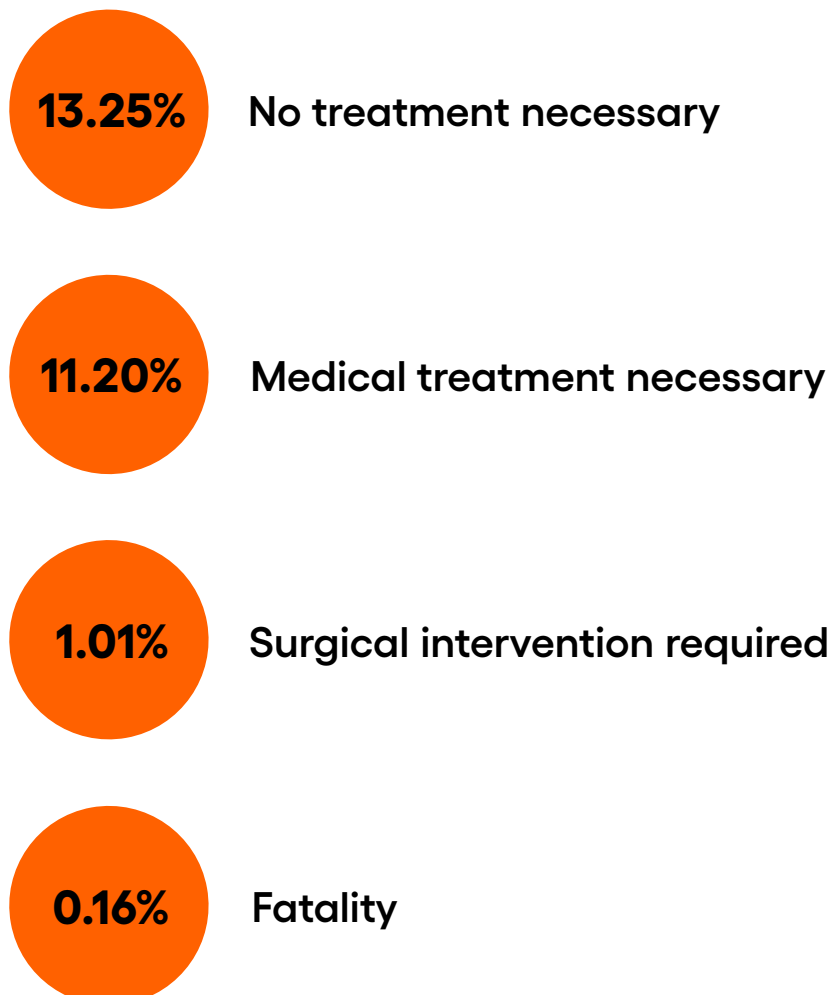
The results below are from the donated data of 16,287 bitch spays.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

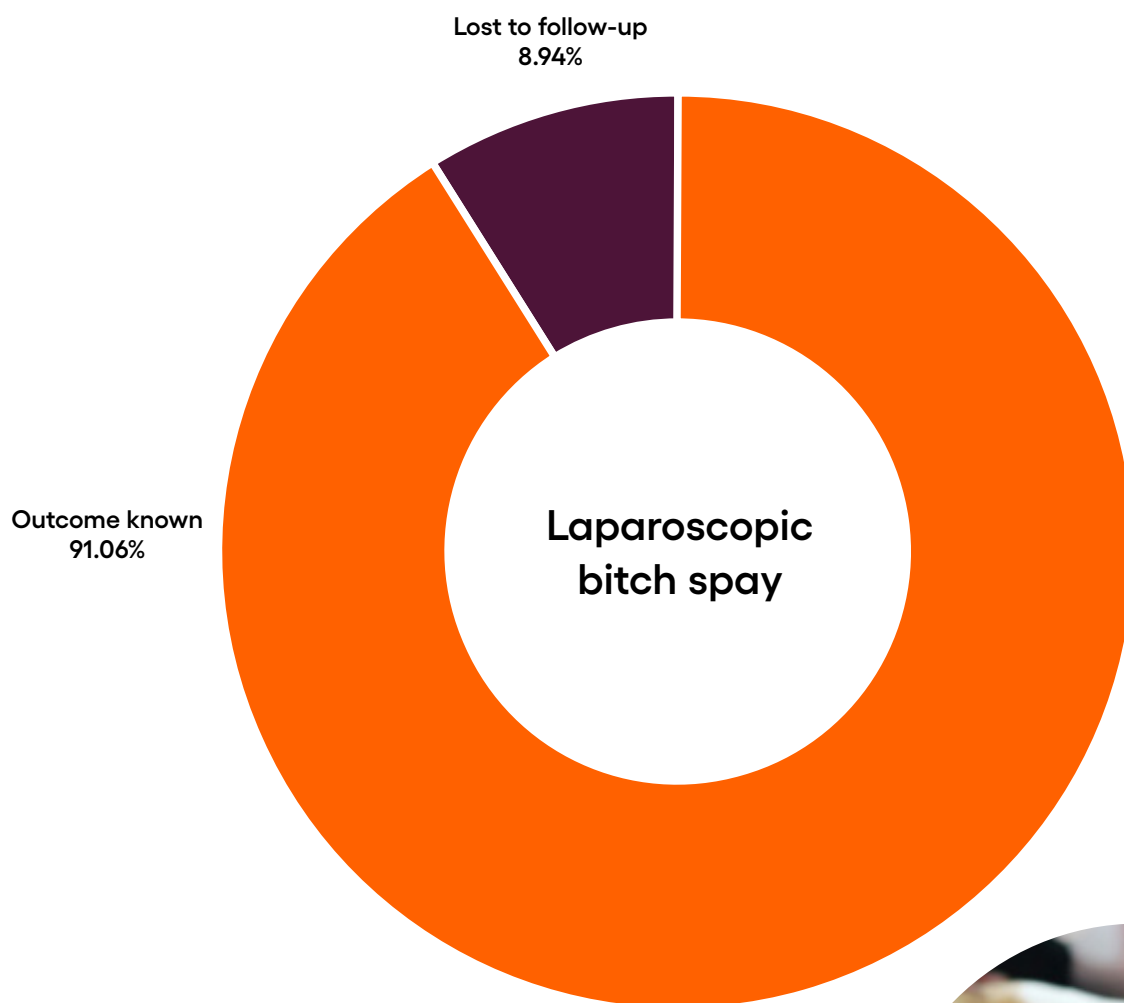


Outcomes of procedures where abnormalities were present:

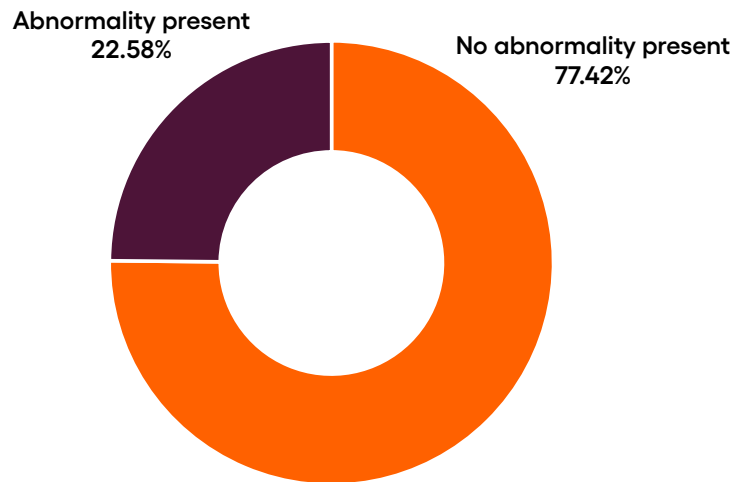


LAPAROSCOPIC BITCH SPAY

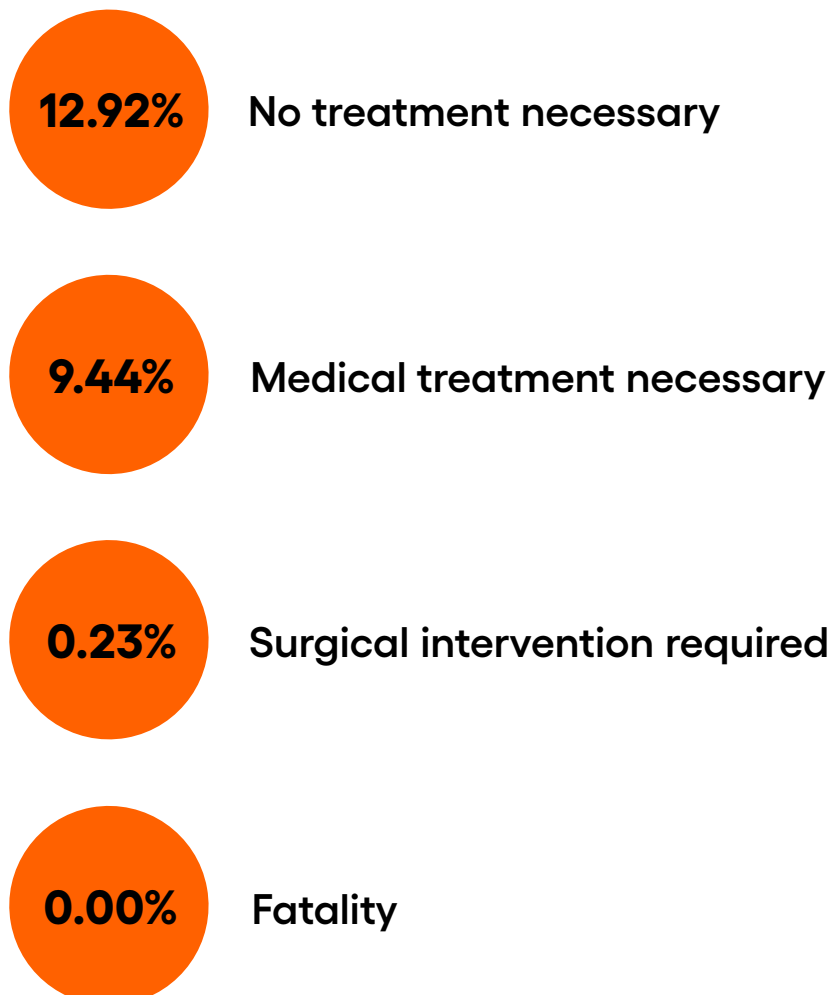
The results below are from the donated data of 1,420 laparoscopic bitch spays.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

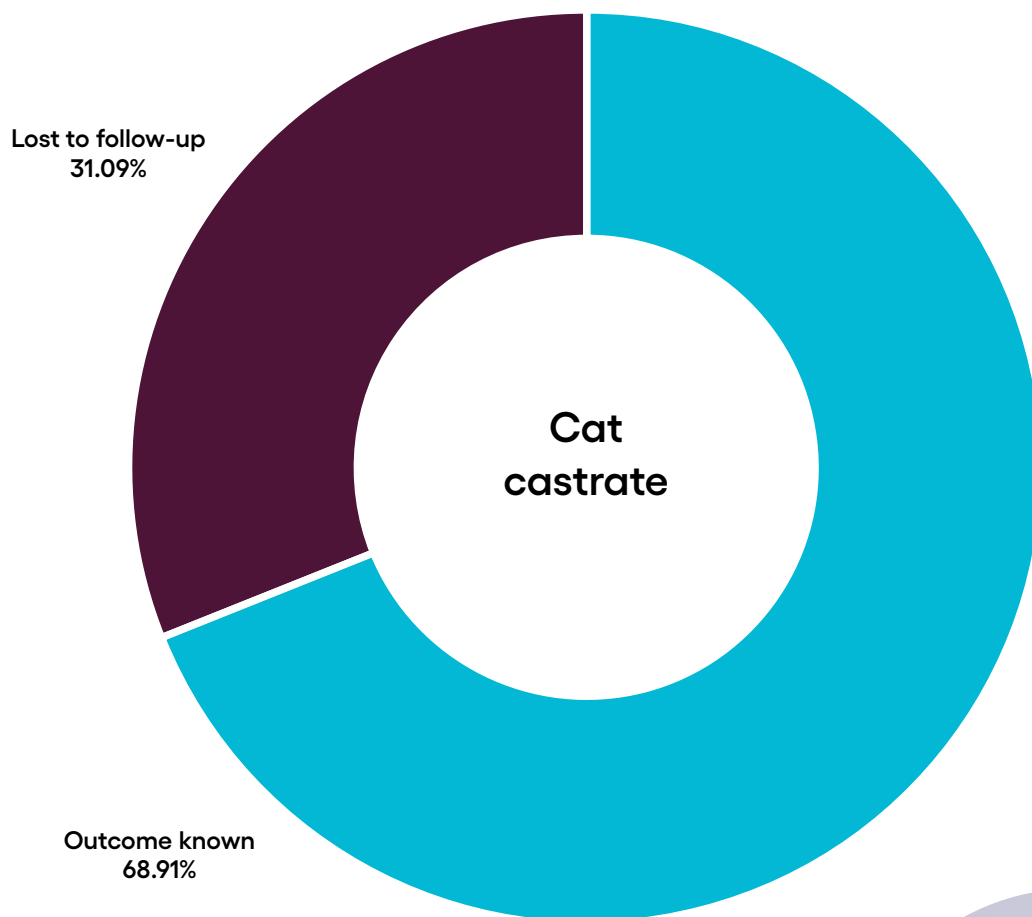


Outcomes of procedures where abnormalities were present:

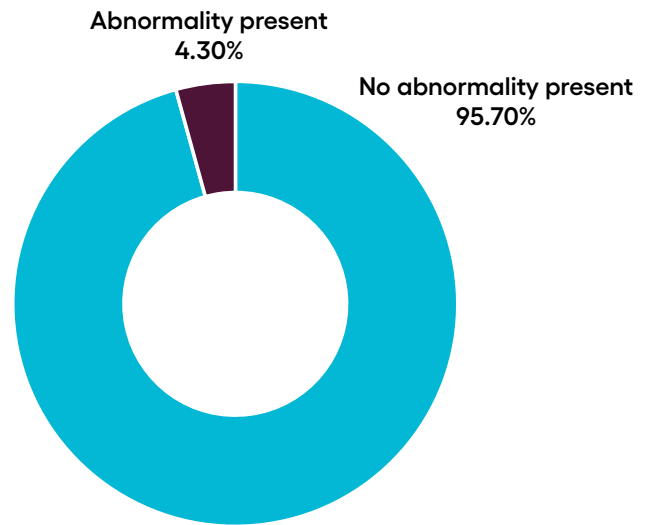


CAT CASTRATE

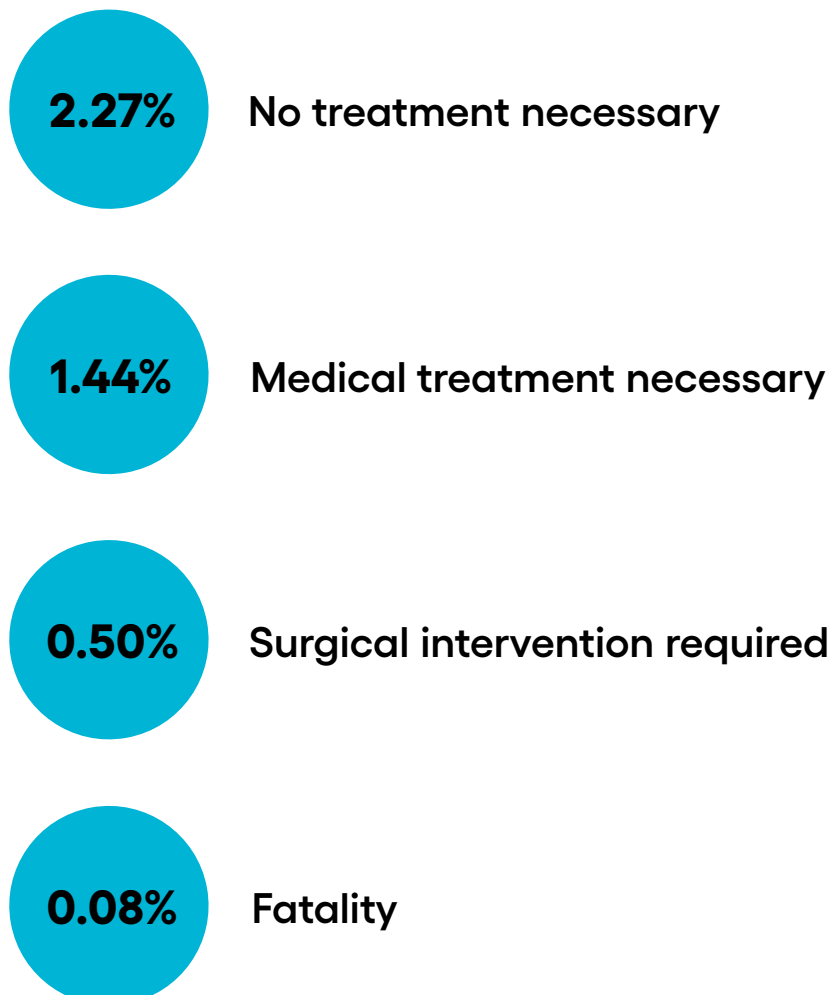
The results below are from the donated data of 10,468 cat castrates.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

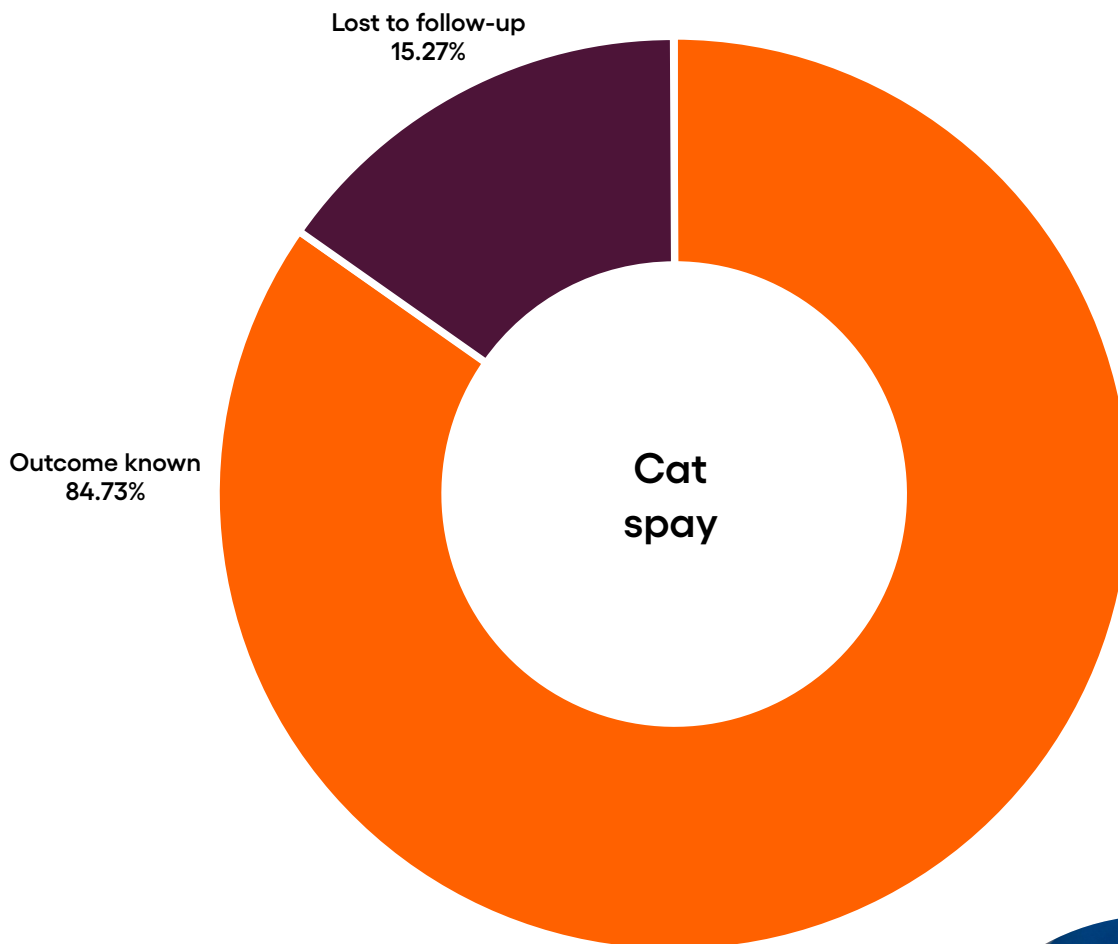


Outcomes of procedures where abnormalities were present:

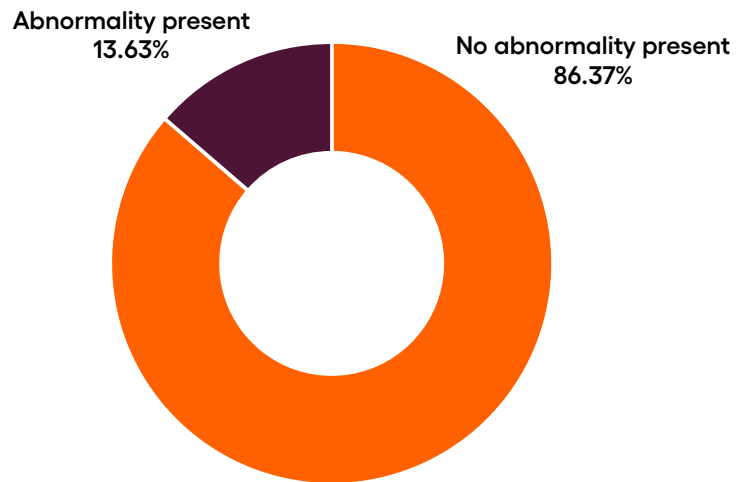


CAT SPAY

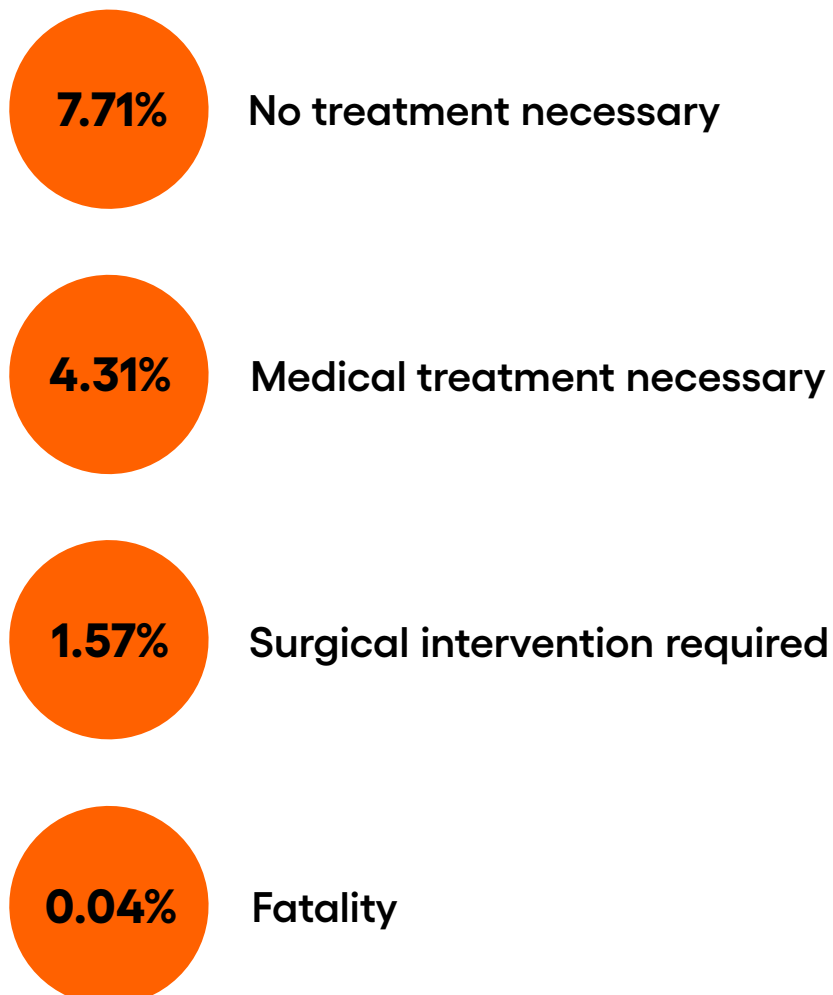
The results below are from the donated data of 16,794 cat spays.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

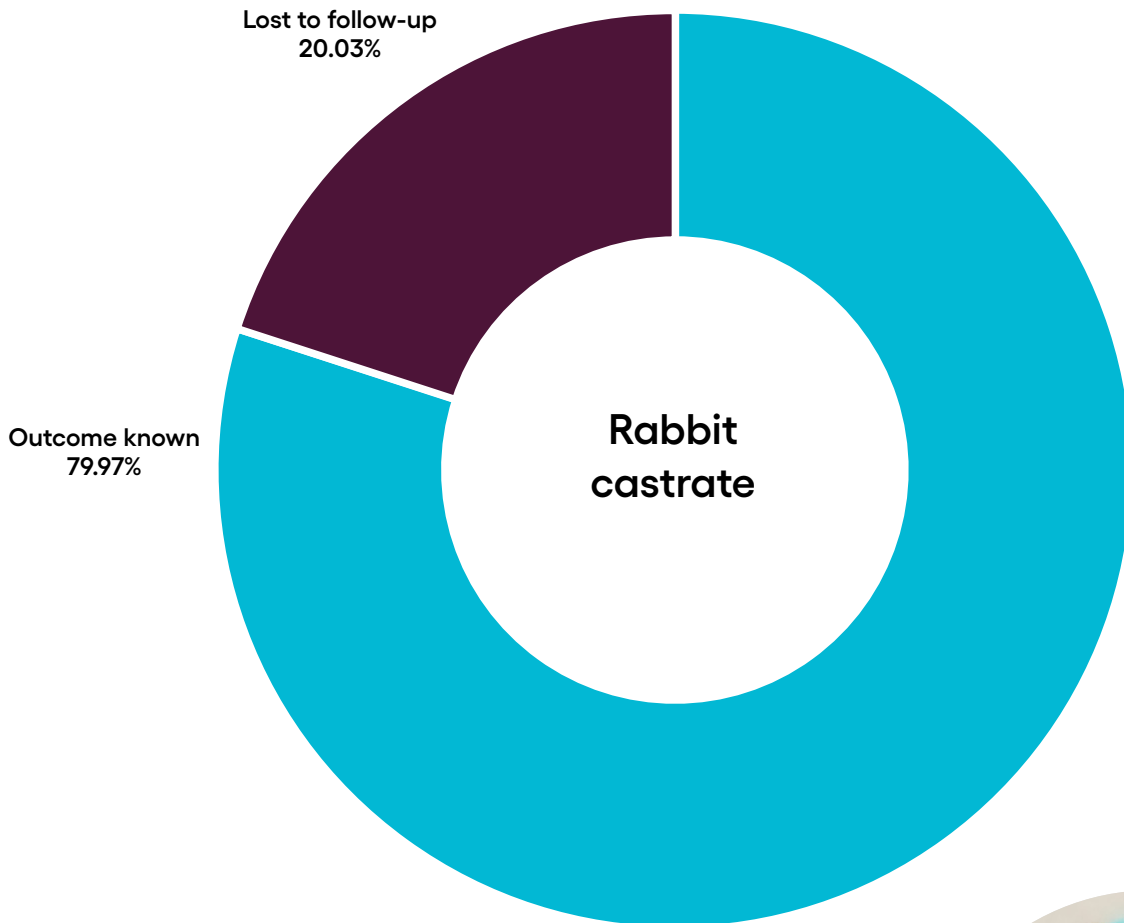


Outcomes of procedures where abnormalities were present:

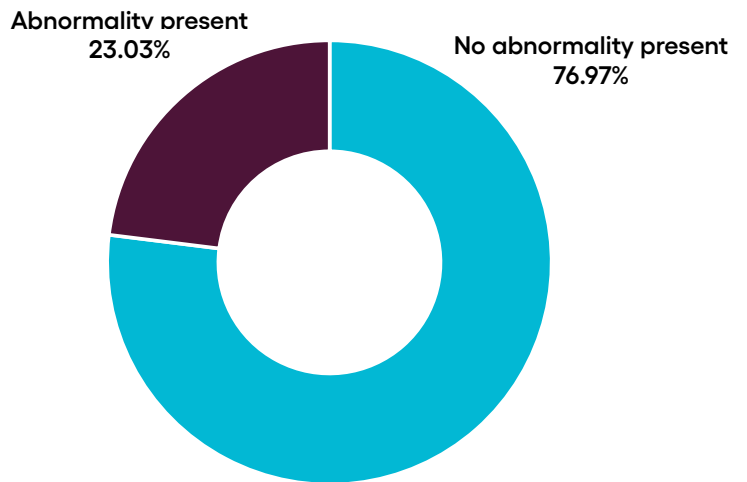


RABBIT CASTRATE

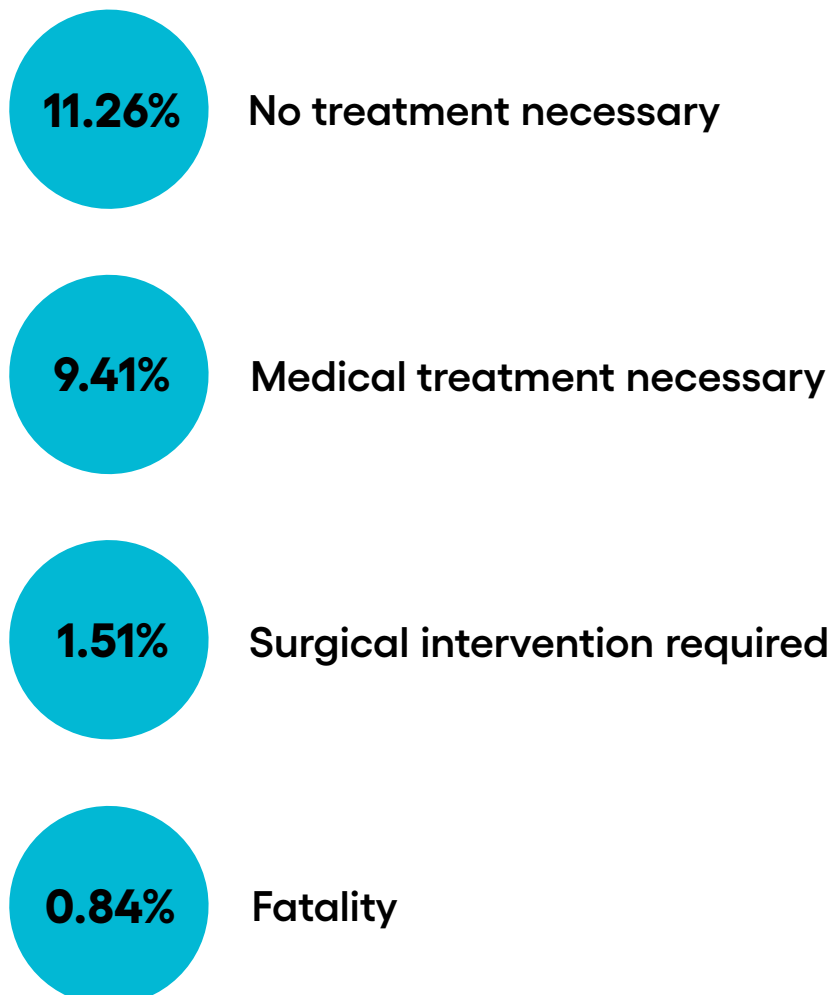
The results below are from the donated data of 744 rabbit castrates.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:

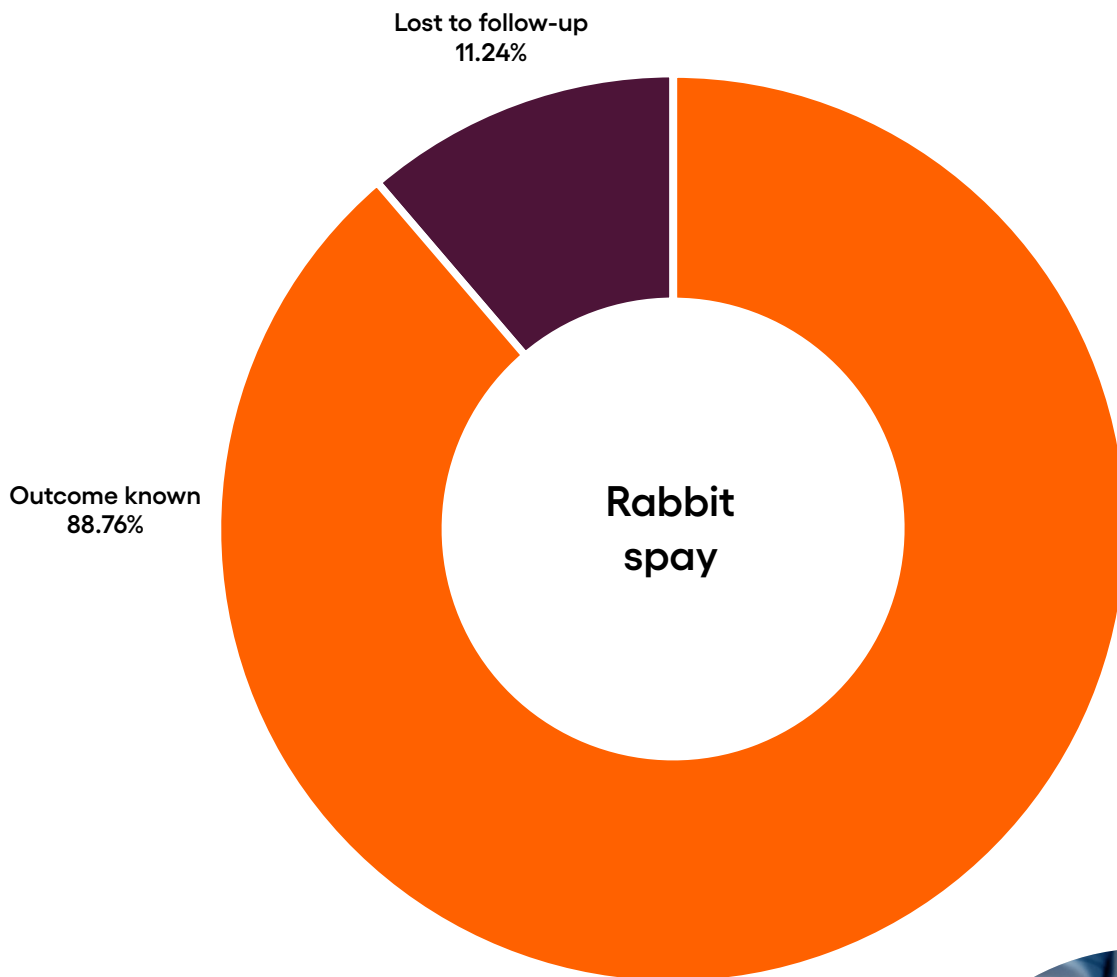


Outcomes of procedures where abnormalities were present:

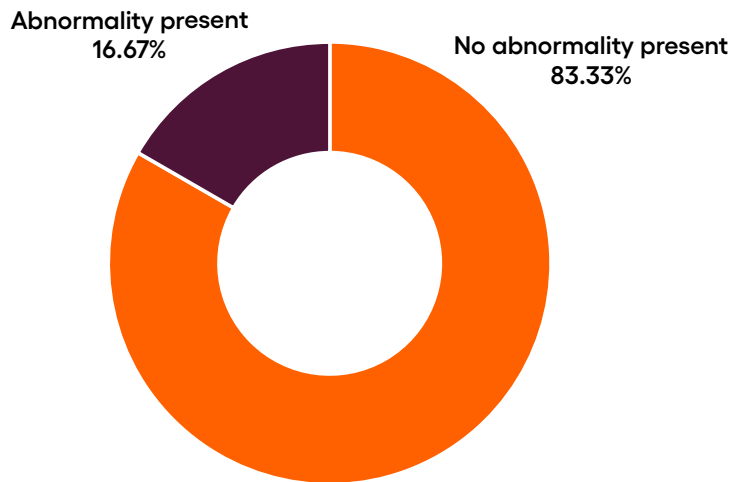


RABBIT SPAY

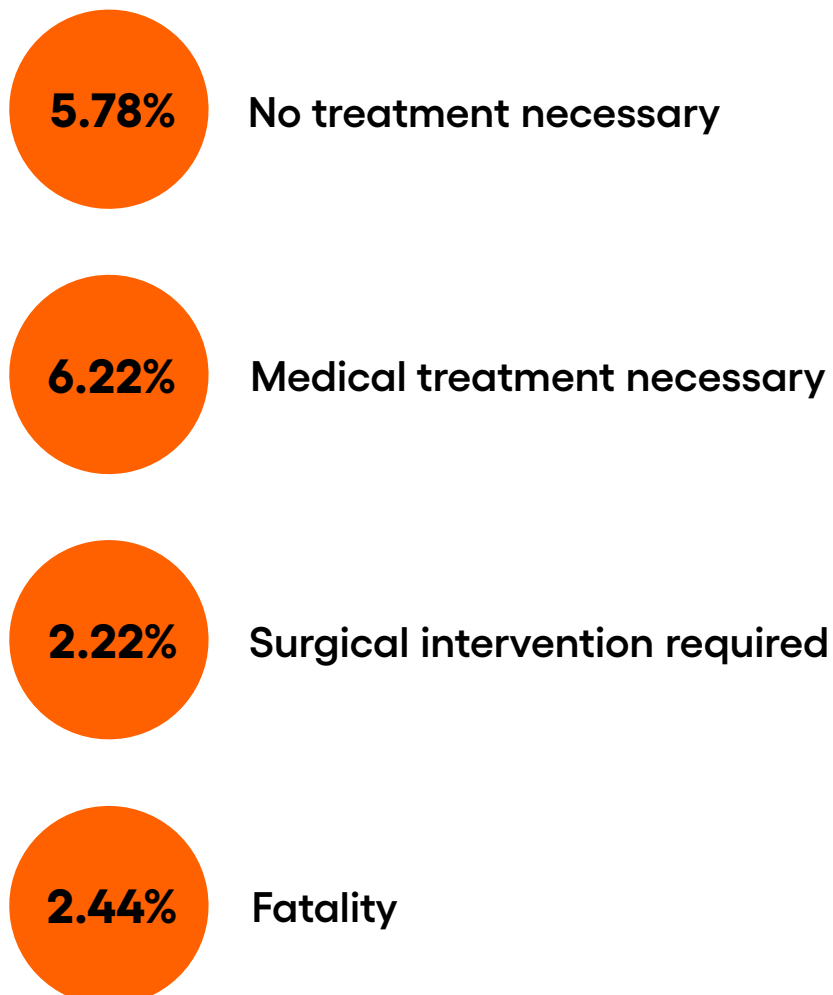
The results below are from the donated data of 507 rabbit spays.



When data from surgeries that were lost to follow-up are removed from the overall data, the following applies:



Outcomes of procedures where abnormalities were present:





TRACK YOUR RESULTS

You can use this page to monitor and reflect on your outcomes. Fill in your results regularly and discuss them with your team in your Quality Improvement meetings.

Species



Procedure

Month / Year

Compare benchmark

Reflect and comment

Set your targets

RESOURCE HUB

The NASAN Resource hub is a collection of resources to help you in your journey to improve your patient outcomes.

The resources are arranged depending on the outcomes identified from the NASAN; no abnormality present, abnormal healing and adverse events/fatalities.

Within the hub, you will find:

- Published evidence
- Knowledge summaries from *Veterinary Evidence*
- Articles
- Case examples
- Rabbit specific evidence

No matter what your results are, there are positive next steps you can take to help improve.

Go to Resource hub

[rcvsknowledge.org/
nasan-resource-hub/](https://rcvsknowledge.org/nasan-resource-hub/)



QUALITY IMPROVEMENT AWARDS

Have you been auditing your neutering outcomes? Have you made changes within practice that have improved your outcomes? Then we want to hear about it and share your success!

What are the awards for?

The RCVS Knowledge Awards for Quality Improvement showcase the implementation of Quality Improvement (QI) techniques which drive improvement within the professions.

Applications must demonstrate how recognised QI techniques have been used to achieve measurable improvements in their area of work.

Who is eligible for the awards?

The awards are open to anyone within the veterinary industry.

Applicants can apply as an individual or as part of a team.

We welcome applications from those who have previously applied for the awards, either with updates to previous QI projects, or details of new QI projects.

What happens if my application is selected as a winner?

Successful applicants will become Knowledge Awards winners and have the opportunity to work with RCVS Knowledge to promote and share their experiences in Quality Improvement. The winners will also receive a £250 prize and are invited to attend an awards ceremony.

Apply for the Quality Improvement Awards today!


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