

ZOETIS DIAGNOSTICS

vetscan Imagyst®
AI Urine Sediment

Hospital Resource Guide



LOOK DEEPER

zoetis

Welcome

to the Vetscan Imagyst® AI Urine Sediment Hospital Resource Guide.

This guide is designed to give you everything you need to get the most out of the Vetscan Imagyst AI Urine Sediment application. Throughout the chapters listed, you will find links to supplemental resources to help address questions.

We hope you find this guide useful. And as always, contact Diagnostic Technical Support for further assistance at:

1800 270 727

DxSupport.AU@zoetis.com

Need guidance on a treatment plan?

Confirm results and a path forward for complex cases with remote specialist consultations at no additional cost for Zoetis Diagnostics customers.* Schedule at [ZoetisDx.com](https://zoetisdx.com).

* Requires the use of Vetscan® Fuse or Hub and at least one Zoetis Diagnostics analyser or service.

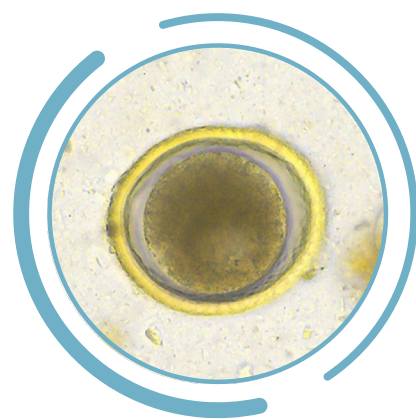
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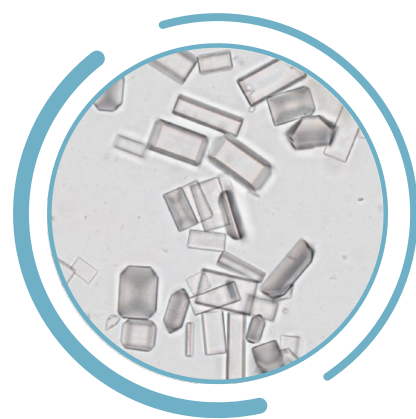
What Is Vetscan Imagyst?

The Vetscan Imagyst is an in-clinic analyser powered by AI (artificial intelligence) that features multiple testing capabilities on a single platform. This multi-use diagnostic tool streamlines your point-of-care workflow with simple setup and comprehensive, repeatable diagnostic findings comparable to a clinical expert in just minutes.¹⁻⁵ With remote expert review available whenever clinically necessary, you can treat patients quickly and with confidence.*



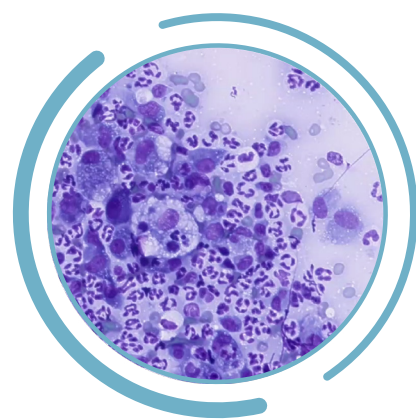
AI Faecal

- ✓ Detects common parasitic ova, cysts and oocysts
- ✓ Clean, efficient approach to faecal analysis



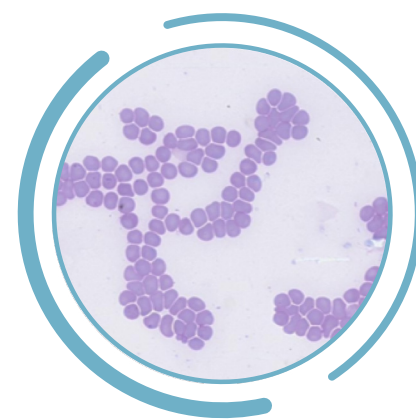
AI Urine Sediment

- ✓ Consistent, thorough urine sediment analysis with standardised sample processing
- ✓ Point-of-care testing reduces sample changes due to delayed testing



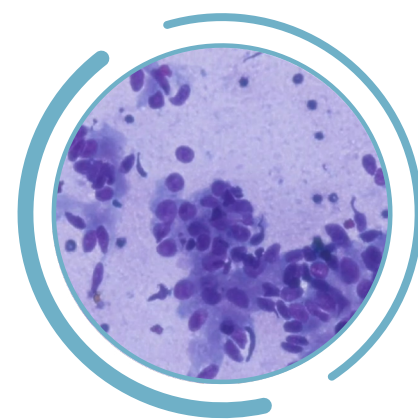
AI Dermatology

- ✓ Analyses skin impression smears and skin and ear swabs to identify yeast, inflammatory cells and bacteria
- ✓ Differentiates between cocci and rod bacteria



AI Blood Smear

- ✓ Identifies haematologic abnormalities
- ✓ Supplements CBC results for a comprehensive haematology picture



Digital Cytology

- ✓ Digital 24/7/365 access to board-certified clinical pathologists
- ✓ Specialist insights within hours⁶

* Additional costs may apply.

1. Data on file, Study No. D870R-US-21-045, 2021, Zoetis Inc.

2. Nagamori Y, Sedlak RH, DeRosa A, et al. Evaluation of the VETSCAN IMAGYST: an in-clinic canine and feline fecal parasite detection system integrated with a deep learning algorithm. Parasit Vectors. 2020;13(1):346. doi:10.1186/s13071-020-04215-x.

3. Nagamori Y, Scimeca R, Hall-Sedlak R, et al. Multicenter evaluation of the Vetscan Imagyst system using Ocus 40 and EasyScan One scanners to detect gastrointestinal parasites in feces of dogs and cats. Journal of Veterinary Diagnostic Investigation. 2023;0(0). doi:10.1177/10406387231216185

4. Data on file, Study No. DHXMZ-US-23-218, Zoetis Inc.

5. Data on file, Study No. DHX6Z-US-23-222, 2023, Zoetis Inc.

6. Data on file, Study No. TI-10365, 2023, Zoetis Inc.

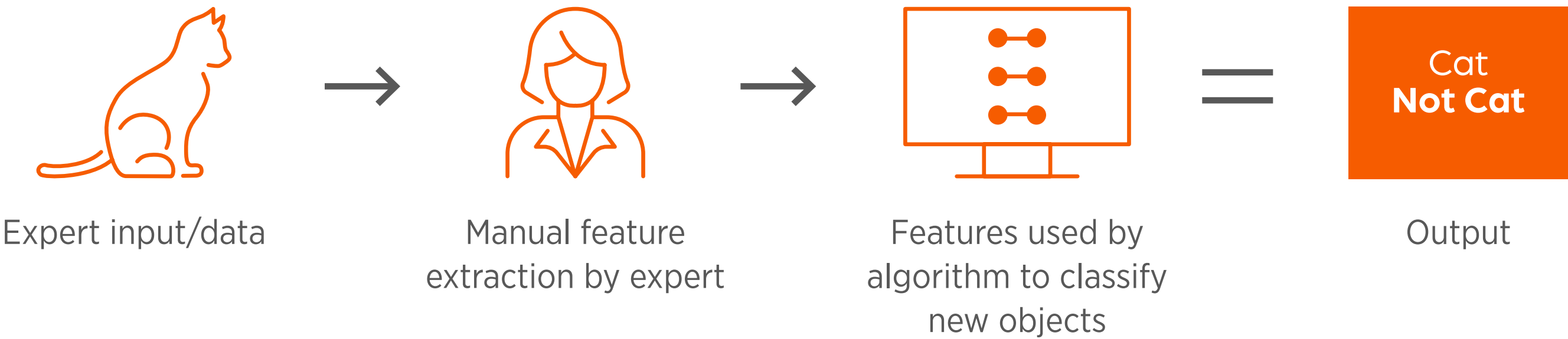
Vetscan Imagyst Overview

AI-Powered Image Recognition: How It Works

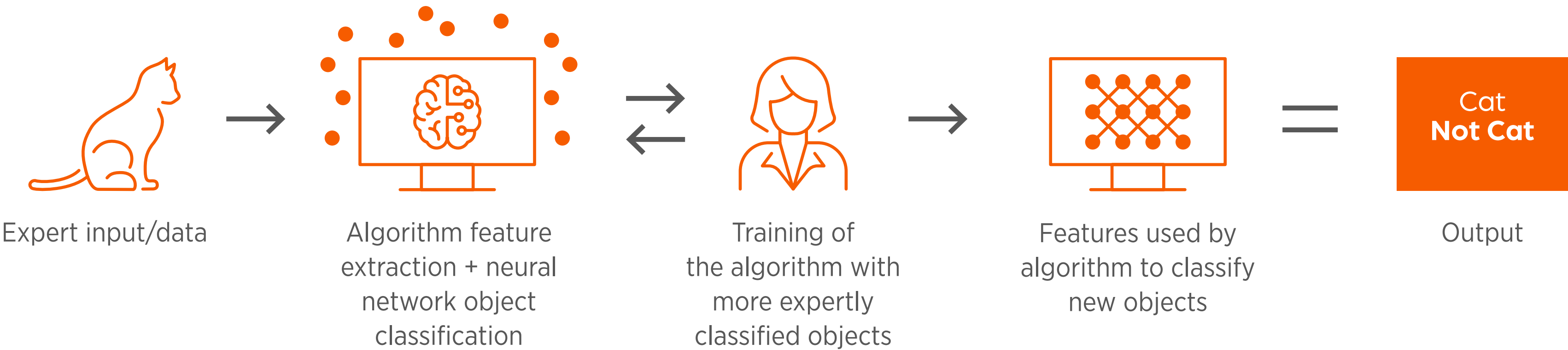
The Vetscan Imagyst leverages deep-learning AI to extract thousands of features that may otherwise be missed with superficial-learning AI algorithms, as seen in Figure 1.1.

Figure 1.1 Types of Image Analysis AI Algorithms

Superficial Learning



Deep Learning



The deep learning system utilised for the Vetscan Imagyst is a convolutional deep neural network, which uses many narrow filters to extract a large quantity of features from a selected sample image. Those features are then applied to the deep learning neural network to enhance accuracy and automate sample analysis to reduce hands-on staff time.

For additional information on AI-Powered Image Recognition, please refer to the Vetscan Imagyst AI Urine Sediment Analysis Whitepaper.

Vetscan Imagyst Overview

Why AI Urine Sediment?

Part of the innovative, multi-application Vetscan Imagyst platform from Zoetis, AI Urine Sediment analysis offers consistent, accurate results within minutes¹ for fast treatment decisions that help improve patient outcomes. With simple instrument setup, easy slide preparation, and accuracy¹ powered by AI, the Vetscan Imagyst AI Urine Sediment analysis overcomes challenges of traditional manual sediment evaluation to optimise point-of-care urinalysis.



Accurate,¹ in-clinic analysis for fast treatment decisions

- ✓ Analysis of fresh urine offers the most diagnostic value²
- ✓ Supported by expert clinical pathologist review* and consultation when needed
- ✓ Evaluates ~1000 fields of view for critical urine sediment elements



Simple operation ensures accuracy¹ and consistency

- ✓ Fast to set up and easy to use, reducing the time needed to get results
- ✓ Easy, in-clinic preparation of urine samples and slides
- ✓ Helps to standardise results regardless of who runs the sample



Innovative AI analysis offers a valuable customer experience

- ✓ Provides a wide range of high-value diagnostics within your clinic
- ✓ Reduces the need for follow-up calls and appointments
- ✓ Helpful information in easy-to-share visual reports

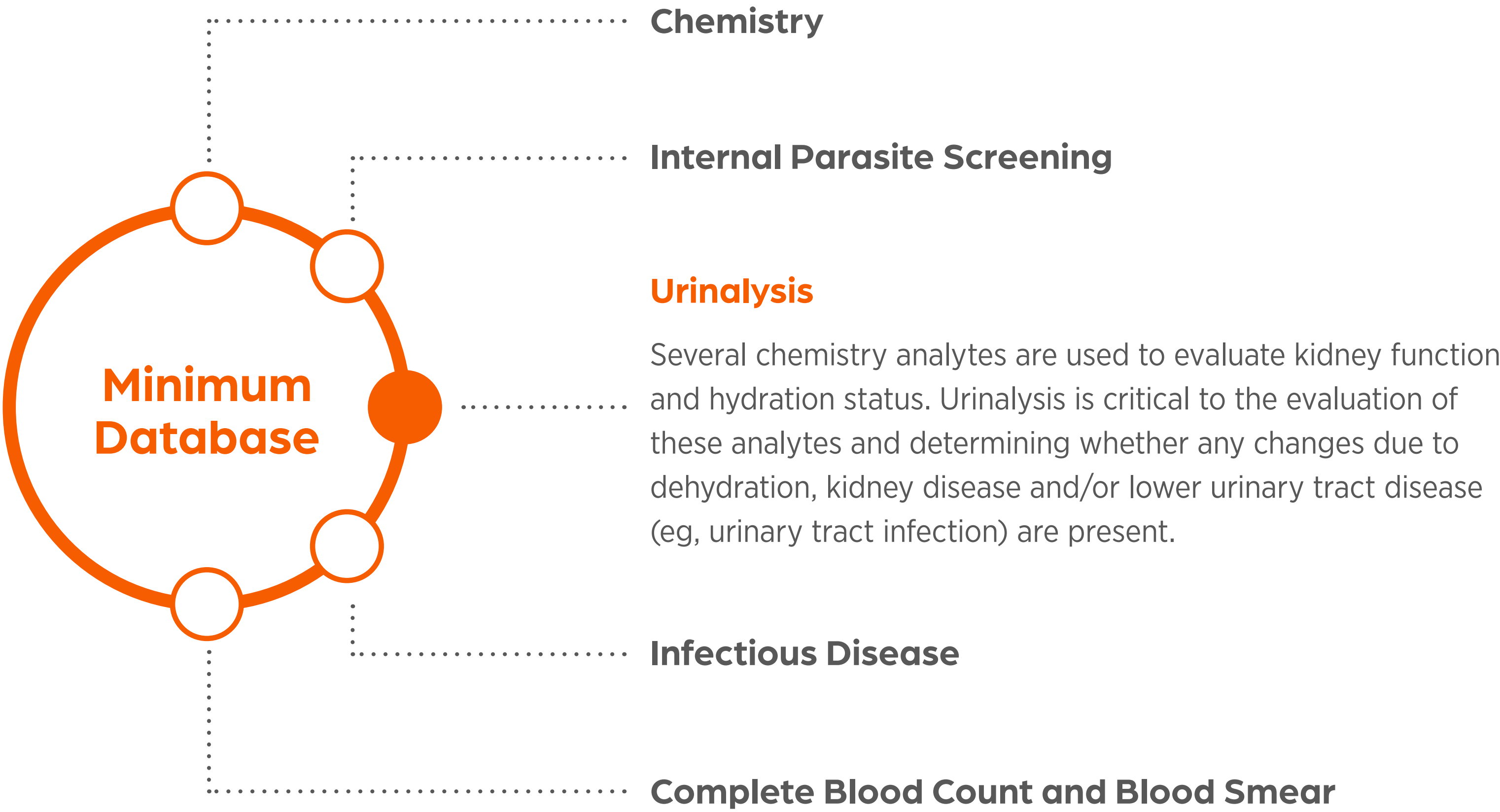
* Additional costs may apply.
1. Data on file, Study No. DHXMZ-US-23-218
2. Skeldon, N, et al, BSAVA Manual of Canine and Feline Clinical Pathology, 3rd Edition. Quedgeley, England: British small Animal Veterinary Association; 2016. p184.

The Complete Urinalysis

Introduction to Urinalysis

Urinalysis is an essential component of the diagnostic evaluation of sick patients, and the results should be interpreted along with the results of a blood chemistry panel. Ideally, urine should be collected at the same time blood is collected for haematology and clinical chemistry, as part of the diagnostic minimum database.

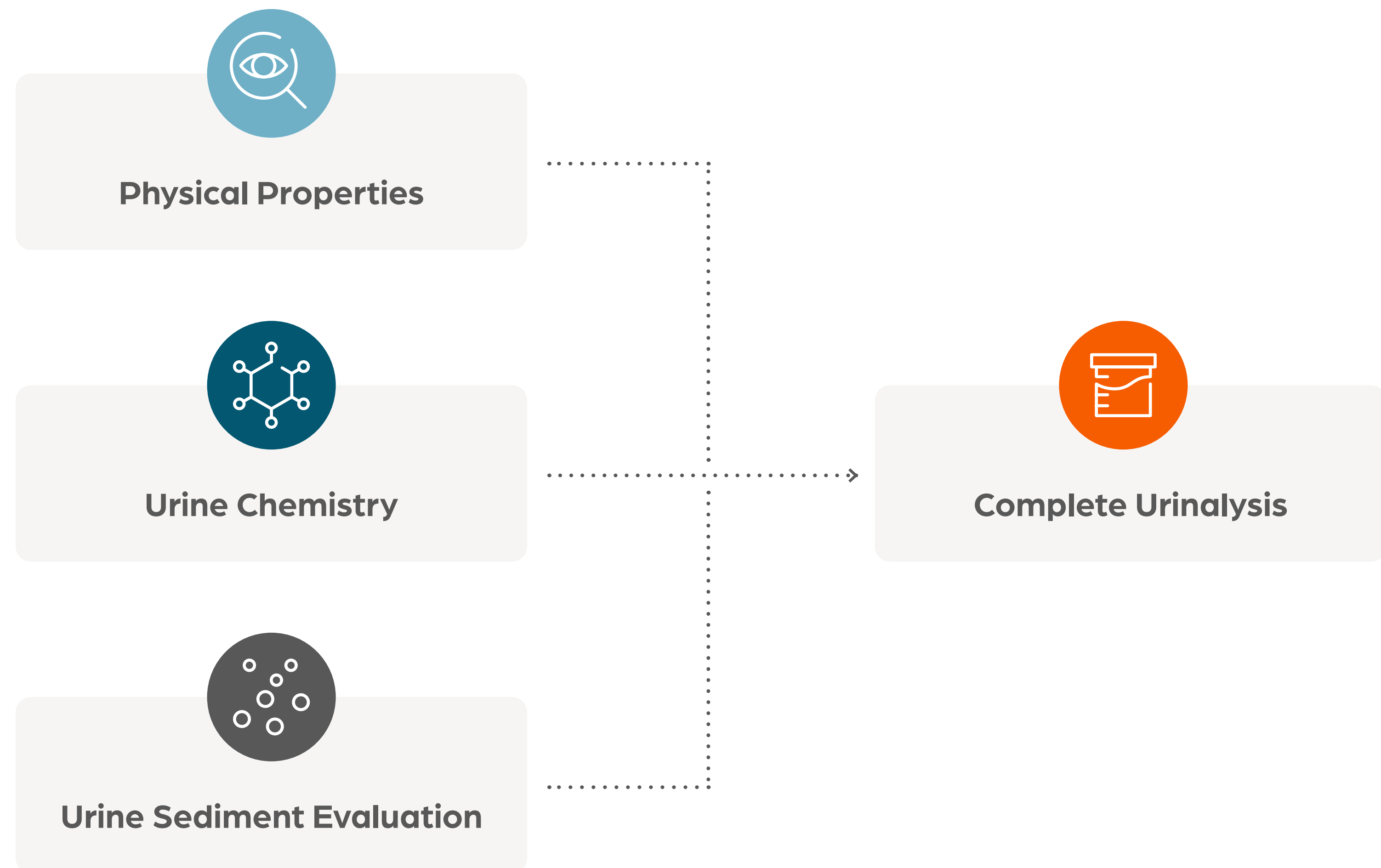
Figure 2.1 Diagnostic Minimum Database



The Complete Urinalysis

A complete urinalysis combines evaluation of physical and chemical properties with microscopic evaluation of urine sediment (Figure 2.2). Urine specific gravity (USG), urine colour, odor and clarity comprise the physical properties. Urine Chemistry is read via multi-test dipstrips.^{1,2}

Figure 2.2 Three Broad Categories of Investigation Make up a Complete Urinalysis



1. Barsanti, Jeanne A. Small Animal Clinical Diagnosis by Laboratory Methods, 5th edition, Elsevier 2012: Chapter 7: Urinary Disorders. p131-143, 152.

2. Skeldon, N., and Ristić, J. (2016). BSAVA Manual of Canine and Feline Clinical Pathology (Vol. Third edition). Quedgeley, Gloucester: BSAVA. p183-205.

