


**Companion animals**


## Cytological and histopathological diagnostics

Cytology and histopathology (fine-needle (aspiration) biopsies, incisional and excisional biopsies) are indispensable diagnostic tools in veterinary practice. They contribute to the diagnosis of diseases in the various organ systems that are amenable to biopsy procedures. The information provided by cytology and histopathology is often crucial to make a solid decision on treatment options.

### GD: quality and technology

The rapid progress in treatment options results in a greater demand for top-quality diagnostics. Since 2005, GD Animal Health Service (GD) has been carrying out diagnostic laboratory tests for companion animals and offers first class diagnostic pathology services.

GD has a team of nine board certified specialists in veterinary pathology, ensuring quality, continuity and short lead-times. This team has extensive expertise in all areas of pathology of domestic animals, with special expertise in the field of tumour pathology, gastrointestinal pathology, dermatopathology and oral pathology. Our specialists are diplomates of the RNVA or the ECVP and most are member of ESVONC, ESVP or ISVD.

GD's laboratory, including the pathology department and the post-mortem room, is accredited according to ISO IEC17025:2005 and certified in compliance with ISO 9001:2008.

The in-house auxiliary histotechnological laboratory carries out all necessary staining and histotechniques, which contributes to short lead times.

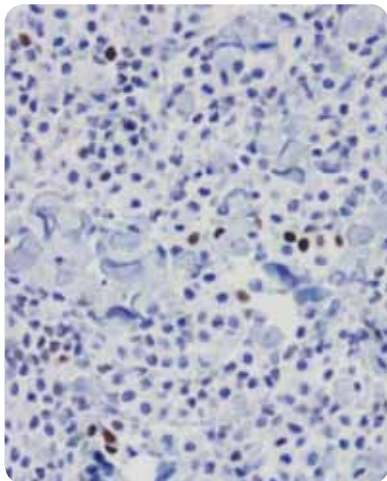
### Services

- Results of cytological examination within 8 hours after having received the samples
- Results of most histopathological examinations within 24 hours after having received the samples
- Possibility to submit additional smears free of charge
- Contact with our pathologists during working hours for additional information
- Special expertise in tumour pathology, gastrointestinal pathology, dermatopathology and oral pathology
- Extensive range of additional (immuno) histochemistry

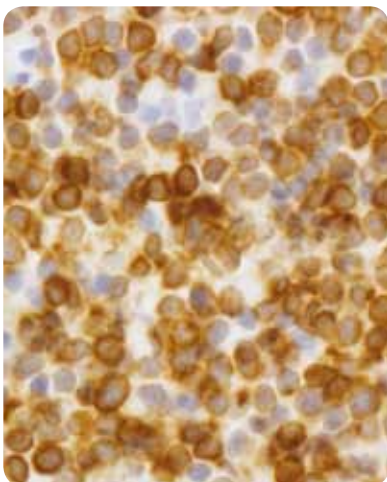
### Additional diagnostics

For advanced tumour diagnostics, various antibody panels have been validated which allow a sensitive and specific diagnosis. GD has developed immunocytochemical staining protocols for smears that enables the immunophenotyping of T-cell and B-cell lymphomas, by investigating the expression of respectively CD3 and CD79a.





*Nuclear expression of Ki67 identifies mitotic activity in tumour cells*



*CD79a expression identifies lymphoid cells of B-cell origin*

For a complete cytological and immunocytological examination five high quality smears of each aspirated lymph node are needed.

In some cases of canine lymphoproliferative disorders, histopathology in combination with immunohistochemistry do not result in a solid diagnosis. Therefore, GD has developed a new PCR for Antigen Receptor Rearrangement (PARR). This PCR for smears, formalin-fixed and paraffin-embedded tissues will supply additional information about the clonal (i.e. neoplastic) nature of lymphoid cells, or the polyclonal (reactive) nature of lesional lymphoid cells.

**AgNOR and Ki67**

On request, we offer AgNOR and Ki67 stains for canine mast cell tumours. The results of these stains provide valuable information about prognosis and therefore help to define the optimal treatment strategy. Smears of canine mast cell tumours may serve as a DNA source for further analysis of c-kit mutations by PCR. The presence of such mutations in specific exons of c-kit are associated with a favourable response to receptor tyrosine kinase inhibitors. Additional information about this test can be found on our website [www.gddeventer.com](http://www.gddeventer.com).

**Submitting samples**

You can send surgically obtained incisional biopsies (including Trucut biopsies) or excisional biopsies to our laboratory in 10% buffered formalin solution. Please make sure, that in case of fragile biopsies, such as liver biopsies, the pots are completely filled with formalin and that no residual air is left in the pot. Any air in the pot will result in sloshing of the formalin fluid during transportation that usually results in fragmentation of fragile tissue biopsies.

In our webshop you can order histology containers, coated microscope slides, containers for transporting microscope slides, liquid/leak-proof bags, absorption material and envelopes.

More information about submitting samples can be found on our website [www.gddeventer.com](http://www.gddeventer.com), including advice on the required materials for submitting tissue samples.



**Submitting samples from countries within the EU:**

As long as they are properly packaged in the correct material, tissue samples can be sent directly to our laboratory. GD has an arrangement with TNT Express, so the tissue samples can be delivered at GD within 24 hours.

TNT Express offers the following services:

- Next day delivery before 9.00
- Next day delivery before 10.00
- Next day delivery before 12.00

Processing of samples delivered at GD before 10.00 a.m. will start the same day.



*GD can also advise you on the materials required for sending in tissue samples.*