

Canine Transmissible Venereal Tumour (CTVT)

Project

Transmissible Cancer Group

Department of Veterinary Medicine

University of Cambridge



UNIVERSITY OF
CAMBRIDGE

Department of Veterinary
Medicine



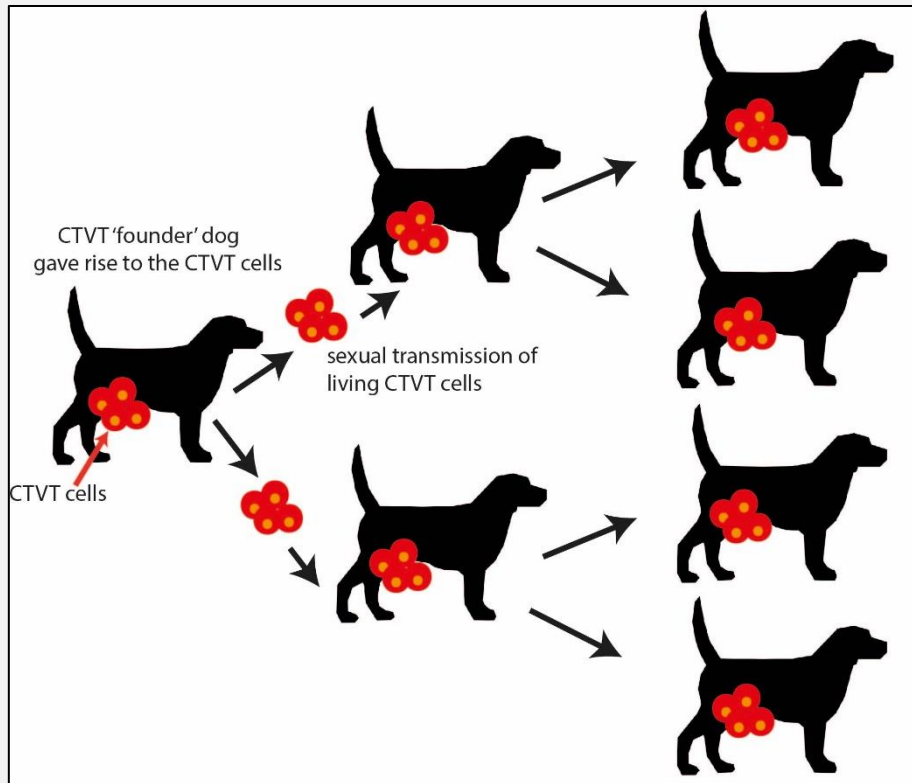
Photo: Anna Czupryna

For any questions about the project or sample collection don't hesitate to contact the Transmissible Cancer Group (TCG) team on transmissible.cancer@gmail.com or visit our lab's website www.tcg.vet.cam.ac.uk.

THANK YOU VERY MUCH FOR YOUR CONTRIBUTION, YOUR SAMPLES WILL BE
EXTREMELY USEFUL AND INTERESTING FOR OUR STUDY!

WHAT IS CTVT?

Canine Transmissible Venereal Tumour (CTVT), also called TVT or Sticker's sarcoma, is a transmissible cancer which arose around 6,000 years ago and has since been directly spreading between dogs by the transfer of living cancer cells during mating.



→
*CTVT in a
female dog*

←
*CTVT in a
male dog*



ABOUT THE TRANSMISSIBLE CANCER GROUP

The Transmissible Cancer Group (TCG) at the University of Cambridge is led by Professor Elizabeth Murchison and one of our main research interests is in understanding the biology of the Canine Transmissible Venereal Tumour (CTVT). For more information, see our lab's website (www.tcg.vet.cam.ac.uk).

AIMS OF THE CTVT PROJECT

1. Understand the origins of CTVT and its spread through the dog population
2. Map the genetic diversity of CTVT around the world
3. Understand the evolution of CTVT
4. Develop new methods for CTVT prevention and treatment
5. Use knowledge from our studies of this unique cancer to advance understanding of human cancer evolution

CTVT PROJECT

SAMPLE COLLECTION SUMMARY



CTVT INFECTED CASES

The five most important items that we are collecting from each CTVT infected animal are:

- 1) Tumour in RNAlater
- 2) Tumour in formalin
- 3) Host tissue in RNAlater
- 4) Photos of the dog and its tumour(s), if possible
- 5) Paperwork: completed data collection form and owner consent form for each dog

It would be helpful to measure the *tumour dimensions before treatment* and then *at each administration of the treatment*, and to record these in the table towards the bottom of the data collection form - this would enable us to include your samples in more studies.

Additional samples, if possible, but not necessary - please, contact us for further details:

- 6) Serum sample (around 2-3ml of serum if possible)
- 7) Cytology smear
- 8) Follow up samples during treatment - collect tumour samples each week when animal receives treatment (no need for a host sample)
 - tumour in RNAlater
 - tumour in formalin
 - serum

CONTROL CASES

These are samples from the same population of dogs, but these dogs are **not** infected with CTVT. Collect samples from 1-2 control cases for each CTVT infected case.

- 1) Host tissue in RNAlater - gonads collected during spay/neuter surgery
- 2) Photo of the dog, if possible
- 3) Paperwork: completed data collection form and owner consent form for each dog

Additional samples, if possible, but not necessary:

- 4) Serum (around 2-3ml of serum if possible)

CTVT PROJECT

SAMPLE COLLECTION PROTOCOL



Ideally, collect 5 items for each CTVT infected case:

- 1) **Tumour in RNAlater** (label e.g. #1 TVT, tumour, RNA)
Cut a small piece of the tumour (0.5cm³) and place it into a small cryovial tube with ~2ml of RNAlater
- 2) **Tumour in formalin** (label e.g. #1 TVT, tumour, formalin)
Cut a small piece of the tumour (0.5cm³) and place it into a small cryovial tube with ~2ml of formalin (not provided in the kit)
- 3) **Host tissue in RNAlater** - gonads (optimal), skin or blood (mix 2-3ml EDTA blood + 1ml RNAlater) (label e.g. #1 TVT, ovary/testis, RNA)
Place a small piece of the host sample (0.5cm³) into small cryovial tube with 2ml of RNAlater. Only one of the following samples is sufficient: ovary/testis (optimal), uterus or skin (e.g. ear notch). (If euthanasia, you can collect internal organs). Least favourable, but still possible, is ~2-3 ml of blood in EDTA (purple tube) topped up with 1 -1.5 ml of RNAlater. Mix well.
- 4) **Photograph**, if possible
Photograph of the tumour(s) and the dog.
- 5) Completed paperwork: **data collection form** and **owner consent form**
For CTVT infected cases, please complete section named "TVT infected" on the data collection form.
*As a minimum, please, record the tumour site and size, sex, age and health status of the dog. It would be helpful to measure the **tumour dimensions** before treatment and then at each administration of the treatment, and to record these in the table towards the bottom of the data collection form.*

Please, store samples in RNAlater in the fridge (short-term) or in the freezer (long-term, more than a few weeks). Please, DO NOT freeze the samples in formalin - these can be stored either at room temperature or in the fridge.

Ideally, collect 3 items for controls = CTVT uninfected cases:

- 1) **Host tissue in RNAlater** - gonads collected during a spay/neuter surgery (label e.g. #2 Control, ovary/testis, RNA)
- 2) **Photograph** of the dog, if possible
- 3) Completed paperwork: **data collection form** and **owner consent form**
For control cases, please, complete section named "TVT uninfected (control)" on the data collection form.

Collect samples from 1-2 control cases for each CTVT infected case. Storage of samples is same as above.

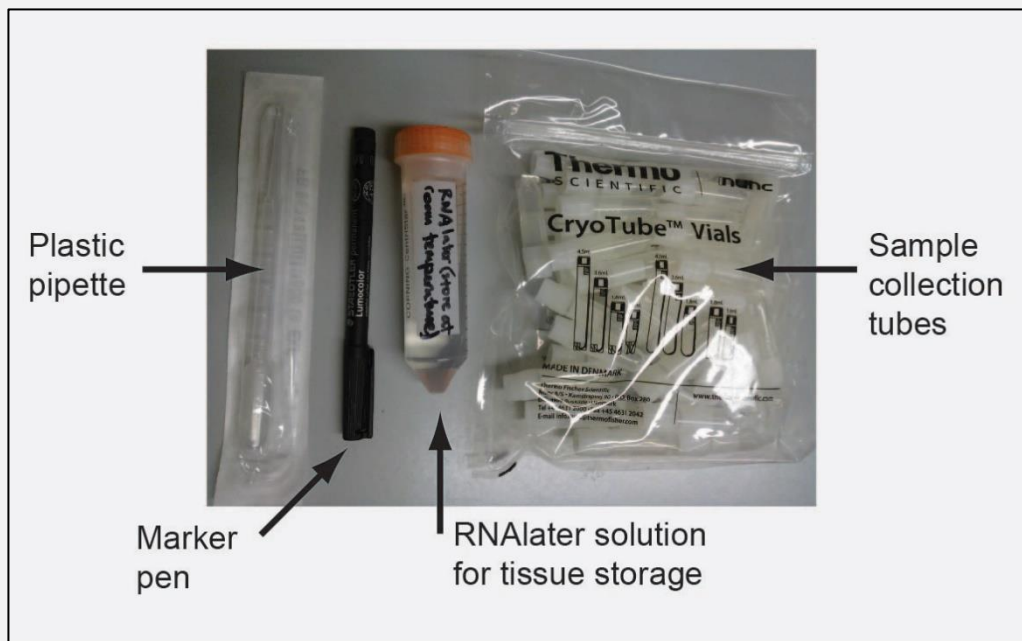
CTVT PROJECT

SAMPLE COLLECTION AND SHIPMENT



SAMPLE COLLECTION KIT

Sample collection kit contains (photo below): RNAlater solution, 2ml cryo tubes for sample collection, pipettes, marker pen, sample collection leaflet. To request a sample collection kit, contact us, and we will post it to you!



SHIPMENT OF SAMPLES

Samples can be shipped at room temperature. We will pay for all the shipping costs associated. Ship samples by **FedEx** and use our FedEx account number: **156982300**. Or ship samples by **DHL** and use our DHL import account number: **959103197**. We have a **UK import permit**.

Contact us on transmissible.cancer@gmail.com when you have samples ready for shipment to request an up-to-date copy of the import permit and to arrange shipment details.

Shipping address:

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Phone number: +44 1223 339376

