Belgian Cancer Registry

THE BELGIAN VIRTUAL TUMOURBANK

Newsletter / November 2022

*In March 2008, the nationwide virtual tumourbank project was launched by the Belgian Minister of Health, Ms. Laurette Onkelinx (initiative 27 of the Belgian Cancer Plan). The Belgian Virtual Tumourbank (BVT network) encompasses the tumour biobanks from eleven Belgian university hospitals (**click here** for the list) that collect and store residual human tumour samples locally. In order to facilitate the search for tumour samples scattered among different Belgian institutions, data collected at sample level is made available for researchers via the online BVT catalogue (BVTc) application. A high quality of the data on the tumour samples requested by scientists for research in oncology is guaranteed by automatic and manual controls performed by the BVT project team at the Belgian Cancer Registry.*

OTHER AVAILABLE MATERIALS

Did you know that also additional types of materials can be stored at the local biobanks and thus be registered in the BVT catalogue? Within this newsletter, we focus on the availability of other human body material besides residual tumour tissue.
If you want to know if the specific samples for your research are available in our catalogue, please request full access so you can browse freely through all available sample data and locate the matching samples for your study!

NOT ONLY RESIDUAL TUMOUR TISSUE

The use of human biospecimens and data within oncology research has expanded during the recent years. Researchers often request other type(s) of human body material besides the residual tumour samples and the biobanks are happy to meet this request. Within the BVT catalogue also **other types of material** that have been collected and stored at the local biobank can be registered.

IPG
*"**Breast** and **colon** cancer samples are the localisations that are most often collected at our biobank"*

CHU UCL Namur
*"Besides residual tumour tissue, we mostly collect **blood** samples, **bone marrow** samples and **tissue biopsy**"*

At this moment (November 2022), **125,907** registrations including 109,989 primary tumours and 15,016 metastasis samples, are available in the BVT catalogue.

For 80,813 (64.2%) registrations only residual tumour samples are available. Most common type of material stored at the local biobank besides residual tumour tissue is corresponding normal tissue (25.5%). Also whole blood (8.4%), plasma (7.6%) and serum (6.7%) are well represented and even DNA, RNA and PBMCs are available for some registrations (Figure 1).

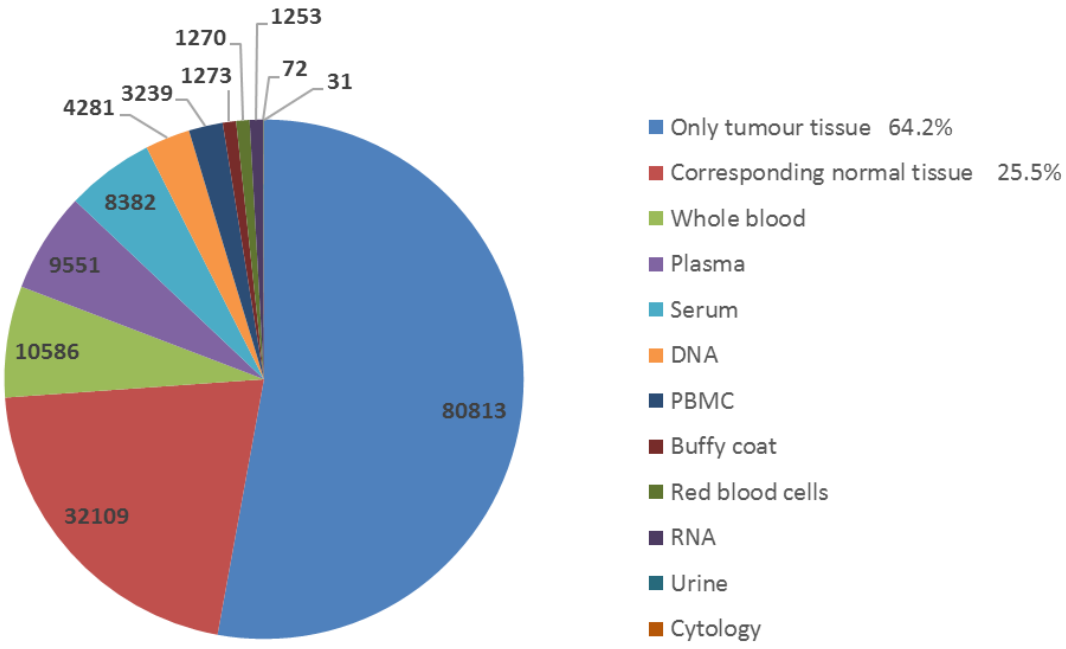


Figure 1: Available materials in BVTc from all biobanks
Remark: Multiple types of available material can be indicated per registration

Distribution of available material for primary tumours and for metastasis samples is comparable, with corresponding normal tissue, blood, plasma and serum as most frequent available other types of material.

WHAT ORGAN TYPES?

To investigate the availability of other types of material per organ type, only registrations of primary tumour samples were taken into account. Results show that registrations of soft tissue, skin and bone and articular cartilage tumour samples have the lowest proportion of other available materials. Organs with the highest proportion of **corresponding normal tissue** samples are other digestive organs, colorectal and kidney. **Whole blood samples** are most frequently available for registrations of head and neck, other intrathoracic organs and lung tumour samples. A large variety of other material is observed for lung tumour tissue registrations in comparison to other organs (Figure 2).

UZ Leuven
*"This year, we received already **63** requests in the context of oncological research in our biobank"*

CHU Brugmann
*"**Blood samples** are most often requested by researchers besides residual tumour tissue samples at our local biobank"*

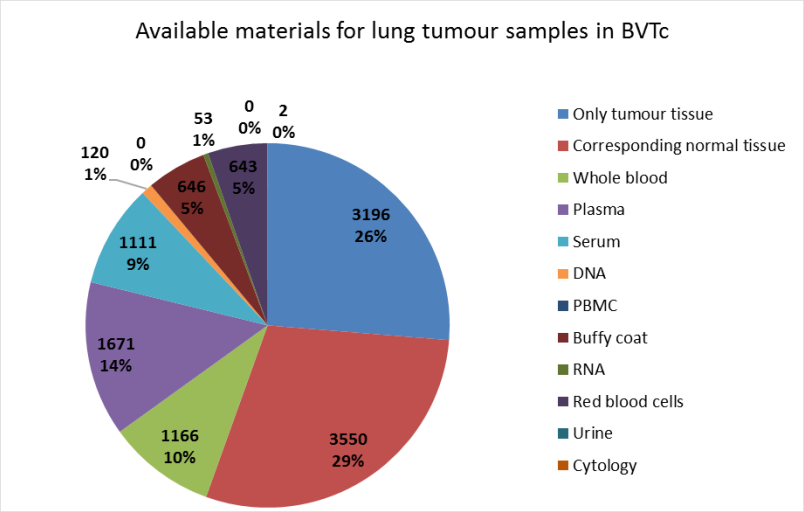


Figure 2: Overview of the available materials for lung tumour samples

EVOLUTION

Over the most recent sample years, the proportion of registrations with only residual tumour storage has decreased, resulting in an increase of the number of other available material collected and stored at the local biobanks. The proportion of corresponding normal tissue remains stable. Increase is most pronounced for DNA, RNA and PBMCs (Figure 3). Please note that for sample years 2020 and 2021 the number of registrations is incomplete.

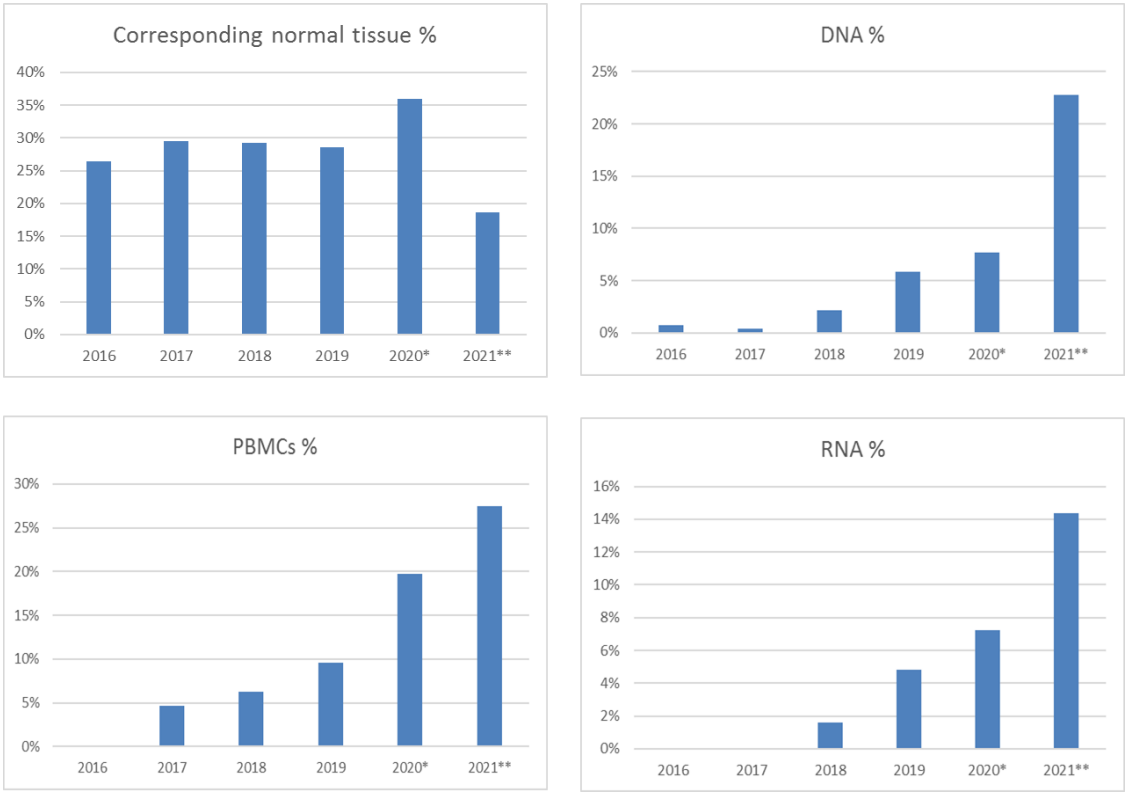
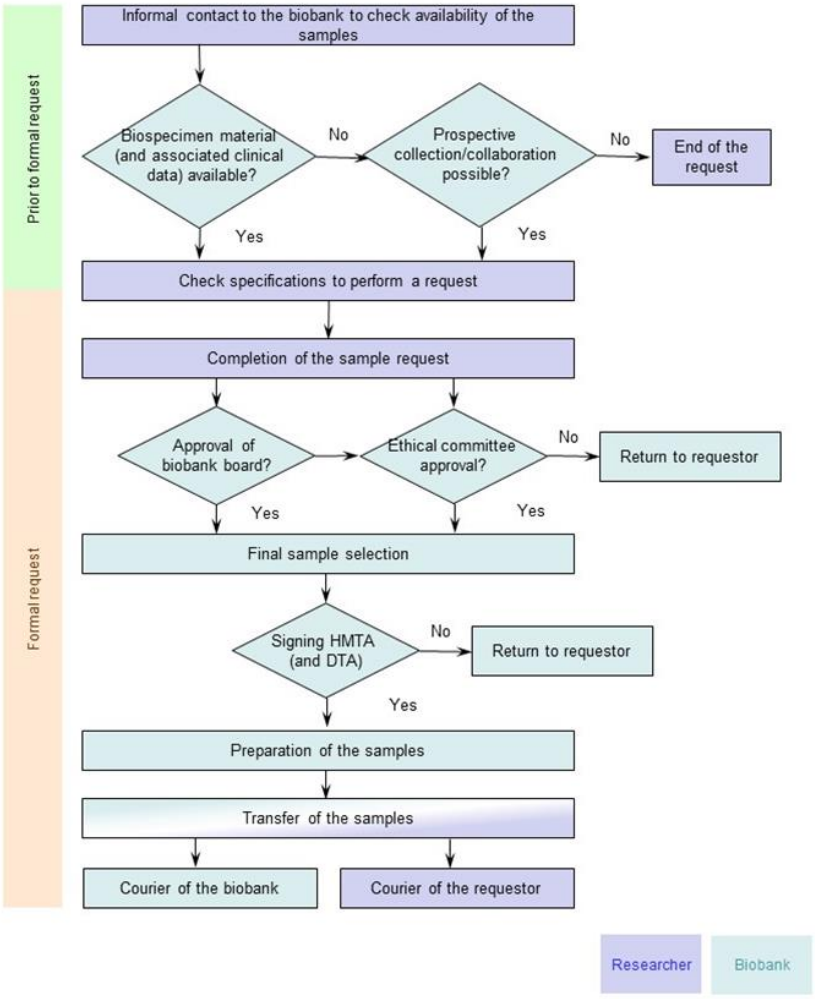


Figure 3: Evolution of 4 types of other available material stored at the local biobanks and registered during the most recent sample years. *Registrations of two biobanks are missing, **Registrations of three biobanks are missing

WHAT'S NEXT?

If you have retrieved your samples of interest, the biobank(s) hosting these samples should be contacted. Within the biobank, there are different steps to follow before the samples can be exchanged and used. Although each biobank has its own specific procedure, the main overlapping steps applicable in all biobanks have been summarized in the flowchart here below and on the website.



IMPORTANT TIPS

- A good **description of the requested samples** is compulsory: type of samples, pathology, minimum volume or quantity, characteristics (e.g. mutation status), inclusion/exclusion criteria, ... This will save time for both the biobank and the requestor.
- Specify the **associated data** as much as possible (sex, age, stage, treatment, ...)
- Prepare a brief description of the **research project**, including the methods that will be used. The biobank can help to advise the correct samples for a certain method.
- The use of biobank samples is not for free so a **biobanking fee** should be included when requesting a research grant.