The Belgian Virtual Tumourbank Catalogue:

a tool for translational cancer research

Belgian Cancer Registry

Araceli Diez-Fraile[1], Eva Van der Stock[1], Mia Slabbaert[1], Karen Vos[1], Katia Emmerechts[1], Liesbet Van Eycken[1], Vincent Grégoire[2] on behalf of the Steering Committee of the Belgian Virtual Tumourbank

(1) Belgian Virtual Tumourbank - Belgian Cancer Registry (BVT-BCR), Koningsstraat 215 bus 7 - Rue Royale 215 boîte 7, 1210 Brussels (Belgium).
(2) Radiation Oncology Dept & Center for Molecular Imaging and Radiotherapy and Oncology (MIRO), Université Catholique de Louvain, St-Luc University Hospital, 10 Ave Hippocrate, 1200 Brussels (Belgium).

1. The BVT catalogue (BVTc)

The Belgian Virtual Tumourbank catalogue is a custom-made web application that aims at facilitating the search for biospecimens scattered among different institutions by collecting data from material of human tumours in one central database. The biospecimens themselves, however, remain physically located at eleven Belgian university hospital biobanks (see partner biobanks below).

Data collected in the BVT registration module is made available for researchers via the BVTc. The quality of the data queried at the BVTc is improved by three levels of quality control. The BVTc contains general, patient, medical, and technical data (but excludes identifying information to ensure privacy of individuals) (Table 1). On November 1st 2013, a total of 27,327 registrations were available in the BVTc (Fig. 1 includes details on primary tumour registrations).

General variables
Local biobank storing the sample
Reference ID

Patient variables
Gender
Age at resection

Medical variables
Type of specimen
Sample localisation (ICD-O)
Laterality
Morphology (ICD-O) (histology and behaviour)
Degree of tumour differentiation
Pathological TNM
Clinical TNM

Technical variables
Sample ID
Year of resection
Conservation mode
Conservation delay
Tumour associated materials (e.g. normal associated tissue, blood…)

Table 1. Main BVTc variables.

Female genital organs 745
Endocrine glands 1045
Kidney 1207
Lymph nodes 1307
Lung 1323
Soft tissue 1435
Other digestive organs 1690
Other 2757
Breast 7268
Central Nervous System 2101
Colorectal 1802

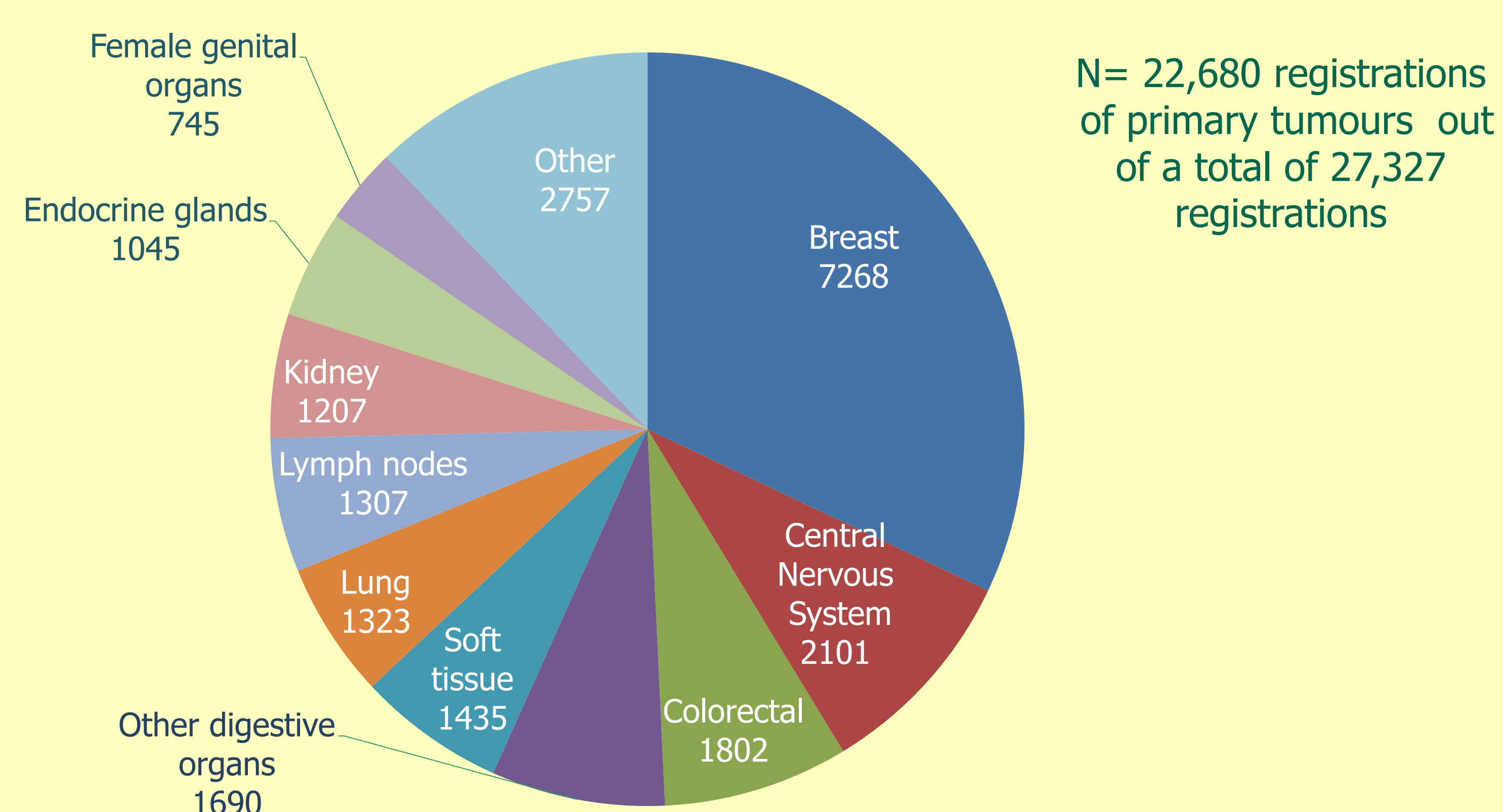N= 22,680 registrations of primary tumours out of a total of 27,327 registrations

Figure 1. Registrations of primary tumours available in the BVTc according to sample localisation on November 1st 2013.

2. How to request access to the BVTc

Go to www.virtualtumourbank.be and click on **information for researchers** to display the catalogue access procedure.

- Download and fill in the catalogue application form.
- Send this form (with requested attachments) to biobank@kankerregister.org.
- After positive evaluation of the request by the BVT Steering Committee, the Belgian Cancer Registry sends the catalogue access agreement.
- After signing and returning this access agreement, access to the BVTc is provided.

3. How to query the BVTc

- After receiving access to the BVTc, go to www.virtualtumourbank.be, click on the **BVTc button**.

  [╫╫ BVTc]

- **Identify** yourself by means of your Belgian electronic identity card and corresponding pin code.
- **Search** for samples of your interest using the query possibilities of the BVTc (Fig. 2).

Figure 2. Belgian Virtual Tumourbank Catalogue: the advanced search allows researchers to query data on basis of general, patient, technical and medical variables. Next to the advanced search, the catalogue also offers a simple search.

- Request to the BVT team a **quality control** on the data of tumour biospecimens of interest. This additional quality control on the data by linkage with the Cancer Registration Database can improve the quality of associated data from biospecimens requested.
- Start the **exchange procedure** with the local biobank(s).

Contact us: biobank@kankerregister.org or biobank@registreducancer.org; Tel: +32 (0)2 250 10 10; www.virtualtumourbank.be

Partner Biobanks