Tumour Biobanking in Belgium:

a central role for the BVT, the nationwide Belgian Virtual Tumourbank

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), Institut de Recherche Expérimentale et Clinique, 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 January 1st 2015, a total of 35,984 registrations were available in the BVTc (Fig. 1 includes details on primary tumour registrations).

General variables	Patient variables
Local biobank storing the sample	Gender
Reference ID	Age at resection

Medical variables	Technical variables
Type of specimen	Sample ID
Sample localisation (ICD-O)	Year of resection
Laterality	Vital state of the patient (at time of resection)
Morphology (ICD-O) (histology and behaviour)	Conservation mode
Degree of tumour differentiation	Conservation delay
Pathological TNM	Tumour associated materials (e.g. normal associated tissue, blood...)
Clinical TNM	

Table 1. Main BVTc variables.

Head and neck 1043
Endocrine glands 1324
Kidney 1593
Lung 1672
Soft tissue 1978
Lymph nodes 1999
Other digestive organs 2223
Colorectal 2460
Central Nervous System 3152
Breast 8590
Other 3685

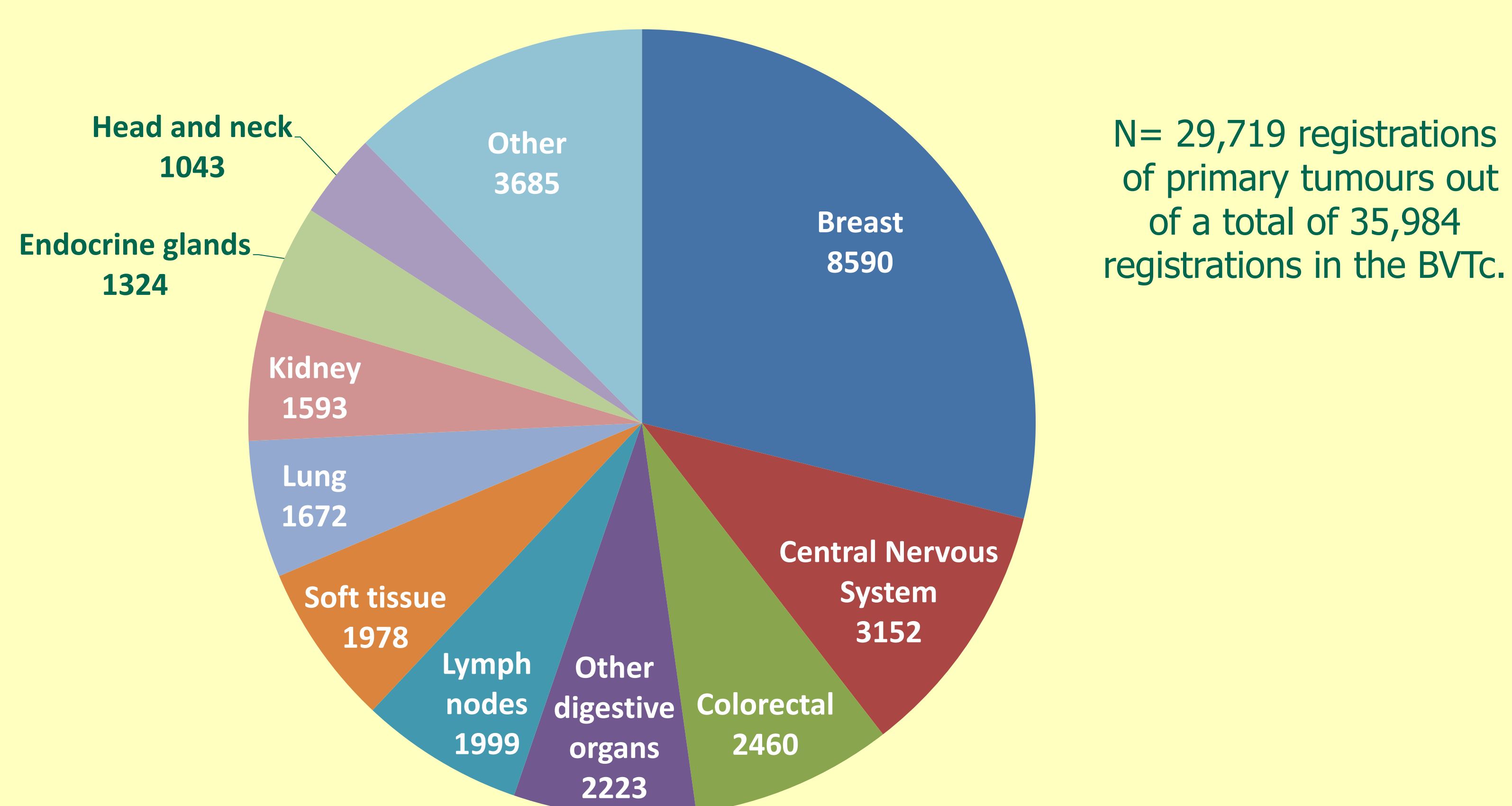N= 29,719 registrations of primary tumours out of a total of 35,984 registrations in the BVTc.

Figure 1. Registrations of primary tumours available in the BVTc according to sample localisation on January 1st 2015.

2. How to request access to the BVTc

Go to www.virtualtumourbank.be and click on **Access to the catalogue** 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 Belgian Cancer Registry 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

service public fédéral SANTE PUBLIQUE, SECURITE DE LA CHAINE ALIMENTAIRE ET ENVIRONNEMENT
federale overheidsdienst VOLKSGEZONDHEID, VEILIGHEID VAN DE VOEDSELKETEN EN LEEFMILIEU

Partner Biobanks