

# The Belgian Virtual Tumourbank (BVT) Project: Availability of childhood cancer samples in the catalogue



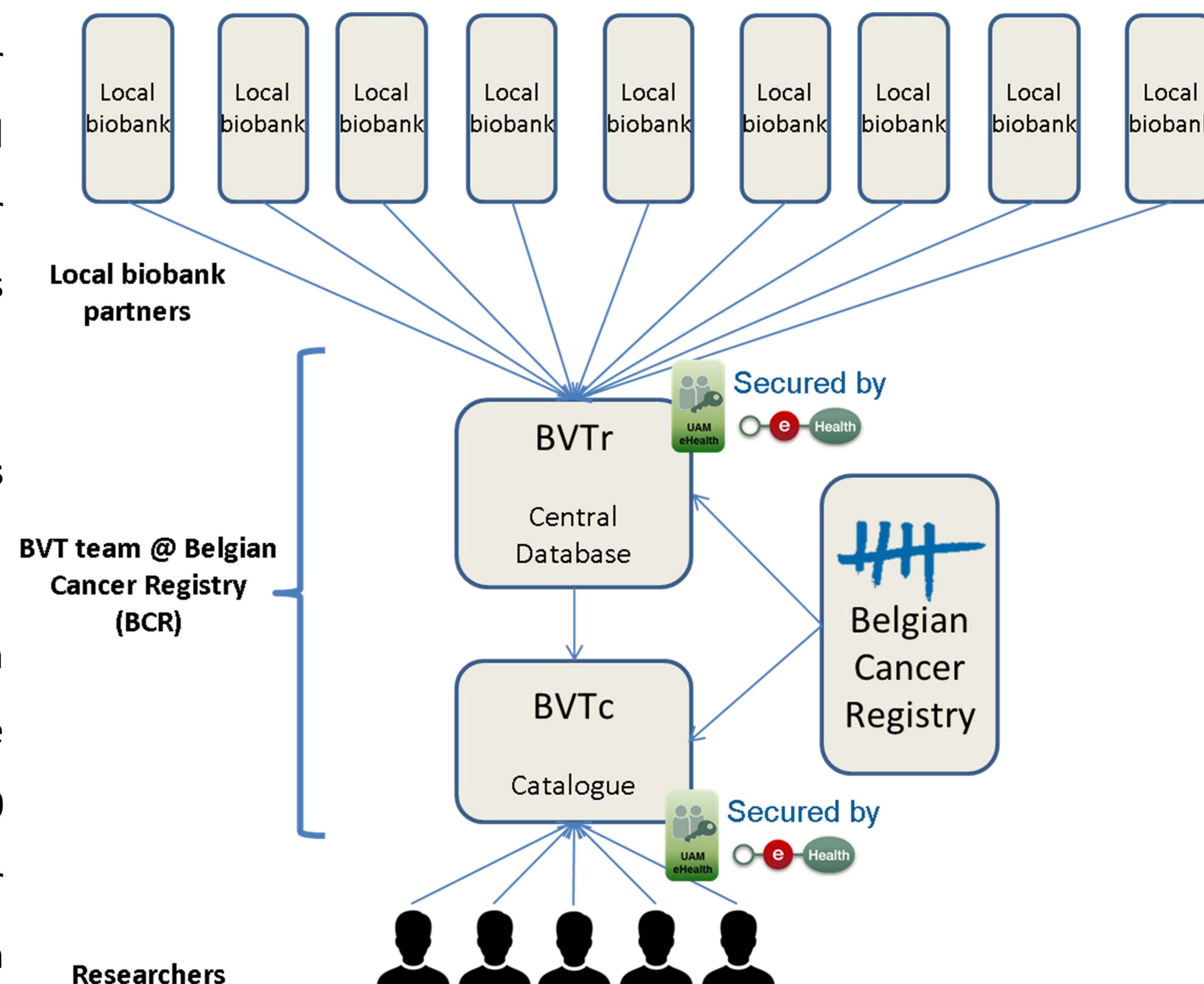
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The Belgian Virtual Tumourbank (BVT network) encompasses the tumour biobanks from eleven Belgian university hospitals that collect and store residual human tumour samples locally. In order to facilitate the search for tumour samples scattered among different institutions, data collected at sample level is made available for researchers via the **online BVT catalogue**.

High quality of the data is guaranteed by **automatic and manual controls** performed by the BVT project team at the Belgian Cancer Registry.

Currently, **93,199** registrations are available in the catalogue for researchers in the oncology field. The majority of the samples available in the catalogue originate from adult patients. However, **each year** about **320** children and **180** adolescents in Belgium face the diagnosis and treatment of cancer. Therefore, our aim was to investigate the availability of residual tumour samples from **children and adolescents** in the BVT catalogue.

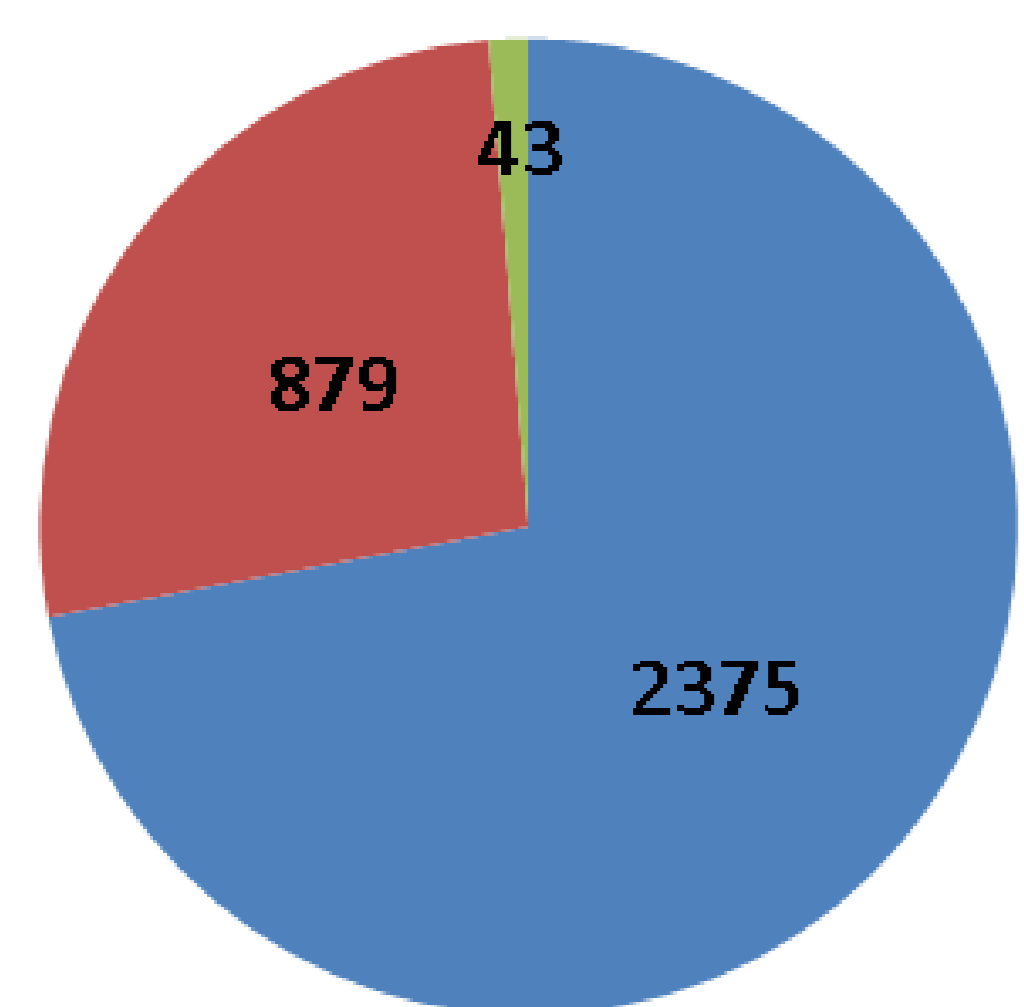


## General overview

Availability of residual tumour samples originating from children (<15 years) and adolescents (15-19 years) in the BVT catalogue. Slightly more registrations are available from boys (58.7%) than girls (41.3%).

Number of registrations			
	All 0-19y	Children 0-14y	Adolescents 15-19y
Girls	1235	764	471
Boys	1753	1164	589
<b>Total</b>	<b>2988</b>	<b>1928</b>	<b>1060</b>

## How are the samples stored?

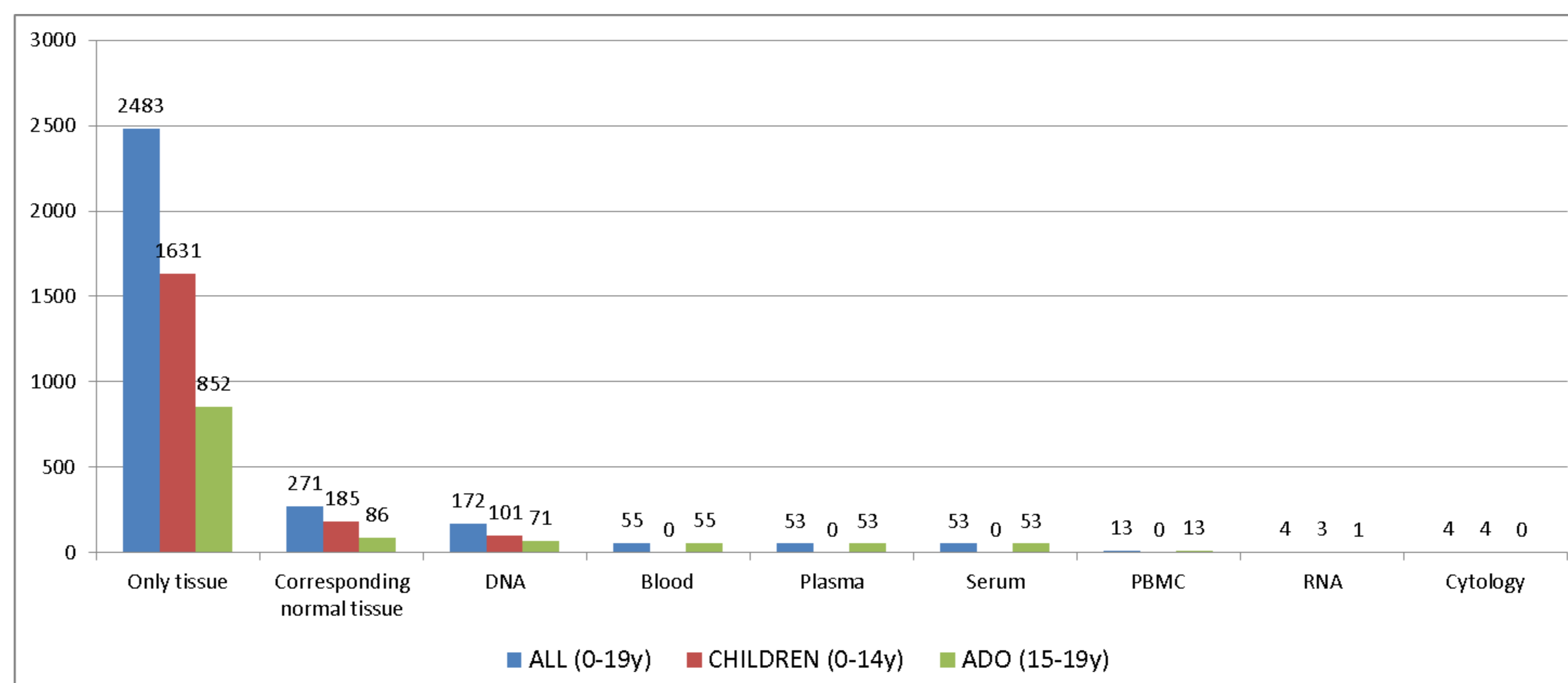


The majority of the rare cancer samples (72.0%) are conserved at -80°C.

More than one fourth (26.7%) of the rare cancer samples are included in paraffin.

18.7% of the childhood cancer samples are stored in less than 30 min after resection.

## What other materials are available?



For 2,483 (79.9%) registrations of childhood cancers only tumour tissue samples are available.

However, also other residual materials can be stored at the local biobank and thus be registered in the BVT catalogue.

Most common type is corresponding normal tissue and DNA.

## Which main tumour types are available?

### ICCC-3 classification

- I - Leukaemias, myeloproliferative and myelodysplastic diseases
- II - Lymphomas and reticuloendothelial neoplasms
- III - Central Nervous System tumours and miscellaneous intracranial and interspinal neoplasms
- IV - Neuroblastomas and other peripheral nervous cell tumours
- V - Retinoblastoma
- VI - Renal tumours
- VII - Hepatic tumours
- VIII - Bone tumours
- IX - Soft tissue sarcoma
- X - Germ cell tumours, trophoblastic and other gonadal neoplasms
- XI - Carcinomas and other malignant epithelial neoplasms
- XII - Other unspecified malignant tumors

### ALL (0-19y) CHILDREN (0-14y) ADO (15-19y)

I - Leukaemias, myeloproliferative and myelodysplastic diseases	19	12	7
II - Lymphomas and reticuloendothelial neoplasms	245	126	119
III - Central Nervous System tumours and miscellaneous intracranial and interspinal neoplasms	307	244	63
IV - Neuroblastomas and other peripheral nervous cell tumours	71	67	4
V - Retinoblastoma	0	0	0
VI - Renal tumours	77	72	5
VII - Hepatic tumours	44	41	3
VIII - Bone tumours	77	37	40
IX - Soft tissue sarcoma	94	59	35
X - Germ cell tumours, trophoblastic and other gonadal neoplasms	51	24	27
XI - Carcinomas and other malignant epithelial neoplasms	38	9	29
XII - Other unspecified malignant tumors	2	1	1
<b>Total</b>	<b>1025</b>	<b>692</b>	<b>333</b>

Tumours are classified according to the International Classification of Childhood Cancer (ICCC-3). All tumour types are represented in the BVT catalogue, except retinoblastoma.

Most common tumour types are lymphomas and central nervous system tumours.

### Conclusion

In Belgium, childhood cancer comprises less than 1% of the total cancer burden. The BVT catalogue is a great value for cancer research, in particular for rare cancers such as childhood cancers by localising tumour samples stored in eleven biobanks.

For further information: [www.virtualtumourbank.be](http://www.virtualtumourbank.be)