

Human Tumour Bank in Croatia: a Possible Model for a Small Bank as Part of the Future European Tumour Bank Network

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THE LACK of properly preserved malignant and matched normal human tissue has been one of the major obstacles for cancer-related research. In an effort to provide investigators with well-documented tumour tissues for cancer research, the Croatian Academy of Sciences and Arts and the Department of Molecular Medicine at Rugjer Boskovic Institute (Zagreb) established the Croatian Tumour Bank (CTB) that is based on the experience of the U.S. Cooperative Human Tissue Network (CHTN) [1, 2]. The CTB was established in 1991, in the framework of the project "Establishment of Tumour Bank in Research Purposes" (supported by the Ministry of Sciences, Republic of Croatia).

The CTB collects various tumour and normal tissue samples, mostly from routine surgical resections (Fig. 1). The protocol for the collection of specimens is developed in consultation with our colleagues from the University of Cincinnati. Immediately after resection the specimens are fixed in different fixatives and embedded in paraffin. The rest of the tissue is snap frozen in liquid nitrogen and transferred on dry ice to CTB and stored at -80°C . The important component of the bank is the collection of more than 6000 paraffin-embedded brain tumours that have been collected over the years at the Department of Neuropathology, University of Zagreb Medical School. Now they have been re-evaluated, selected and, after updating of the clinical and pathohistological data, included in CTB.

For each specimen stored in the bank there are two forms that are filled in by CTB personnel and clinicians, respectively. The first form contains general information like age and sex of the patient, clinical and pathohistological diagnosis, stage of tumour differentiation, TNM classification, etc. The other form is specific for each group of tumours and contains clinical data like anamnesis, therapy, postoperative follow-up, etc. All data are computerised and, therefore, are easily accessible for screening and statistical analysis.

For organisational purposes Croatia was divided into four regions served primarily by clinical centres or major academic institutions. A project study group, composed of scientists and clinicians with skills and long-term interest in cancer research,

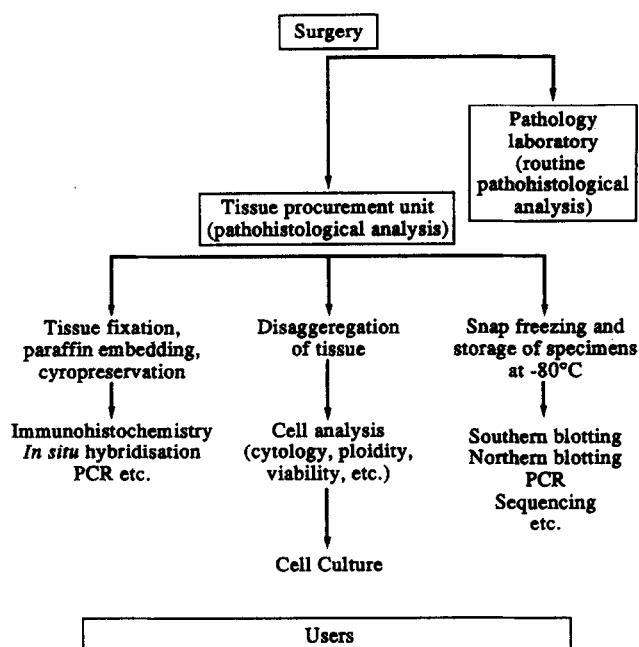


Fig. 1.

oversees the operation of the CTB. Each division is responsible for the diagnosis and quality of specimens it provides. However, further verification from a central facility in Zagreb is often performed to assure high quality of pathohistological diagnosis and specimens preservation.

It is the policy of the CTB that pathological diagnosis and patient care have absolute priority over the use of any specimen in research. Therefore, diagnostic quality of the specimen at no time can be compromised to obtain tissue for research purposes.

In several European countries there are different models of tumour banks [3–8]. Together, they can serve as a nucleus for a future European network. Under ideal circumstances, each country would house a tumour bank that would later serve as a repository for the entire European community.

In such a scenario, all details regarding governance of the whole network, quality, biohazard and infection control, investigators' requirements and priorities should be developed by a joint European board on the basis of specific needs and the experiences of other networks.

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