

# Brain Tumour Research Study in Ireland - An Overview

Beaumont Hospital (Beaumont) and Genomics Medicine Ireland (GMI) are collaborating on a study to create a Brain Tumour Information System (BTIS) for adults at Beaumont. Beaumont already participates in one of the world's most comprehensive Childhood Brain Tumour Information Systems currently available to oncologists and pathologists. The scope of this current project is to develop a similar system for adult patients with brain tumours. The BTIS will improve clinicians' overall understanding of adult brain tumour biology and will hopefully lead to faster and more accurate diagnosis for adult patients.

Emerging genetic technologies present a new era in medicine and further research in this area will address the urgent need for new interventions and approaches to treatment. The hope is that discoveries made using the archived tissue samples\* (from adult patients who have previously undergone treatment at Beaumont) may benefit patients with brain tumours in the future.

This study has potential to translate to health improvement for future generations in a number of areas



More accurate and earlier prediction of brain tumour behaviour



Better understanding of the patient's prognosis and how the tumour is likely to progress



Better understanding of which therapeutics are best suited and at what dosage for each patient and the potential to develop new therapeutics

\* Residual tumour samples and tumour data [e.g tumour size, location and growth rates] from adult patients who underwent surgery for a brain tumour at Beaumont Hospital between 29 November 1987 and 7 August 2018.

## Work to date:

**2016:** The BTIS research project commenced in 2016 with approval granted to conduct the research by Beaumont Research Ethics Committee in 2016 under an "institutional waiver of informed consent" which allowed Beaumont and GMI to conduct research on Beaumont Hospital's existing brain tumour tissue archive.

**2018:** In accordance with new 'Health Research Regulations' (HRR) following the introduction of GDPR in Ireland, a Consent Declaration was required from the Health Research Consent Declaration Committee in relation to the joint BTIS research project.

**October, 2019:** Following the introduction of the Health Research Regulations, the study was subsequently reviewed and approved by the Appeal Panel of the Health Research Consent Declaration Committee. As a condition of the Consent Declaration, a 90-day publicity campaign is required to be conducted which provides information to relevant members of the public on the purpose of the project and how to opt out. (For more information about the Declaration granted, please see [www.hrcdc.ie](http://www.hrcdc.ie) - Decision of Appeal Panel Ref 19-006-AF3).

## Opting in / out of study:

### To Opt In to Study:

- No action required.

### To Opt Out of Study:

- **Living Patients:**  
If you were a brain tumour patient at Beaumont Hospital within the time period 29 November 1987 and 7th August 2018, you may request that your samples and data are not included in the research.
- **Deceased Patients:**  
If you are a family member of a deceased patient who was a brain tumour patient at Beaumont Hospital within the time period, you may request that your family member's samples and data are not included in the research project.

Further detailed information on the project is also available to download from [www.btis.ie](http://www.btis.ie).

If, having read the detailed project plan, you wish to opt out, please contact **BTIS, Beaumont Hospital, Dublin 9** by post, or email [btis@beaumont.ie](mailto:btis@beaumont.ie). After June 12th 2020, it will not be possible to be excluded from the Research project.

# Beaumont /GMI BTIS PROCESS

## Archive Sample Collection

Patients, and their family members, are informed about the study via the public advert and the BTIS website, where they are afforded the opportunity to opt-out of the study if they wish.



Archive tumour samples and associated medical data of the research participants are collected and added to the study.

## Sample Processing

1

The tumour samples and medical data are coded by Beaumont before being sent to GMI, thus making research participants samples unidentifiable in the study.



2

A C G T A C G  
A G C T A C G

DNA is extracted from the tumour sample, and using an advanced scientific technique called “genomic sequencing”, the tumour sample is converted to data.

3

This data, along with the medical data, is added to the Brain Tumour Information System (BTIS), which allows researchers to group high-grade brain tumours according to certain genetic ‘biomarkers’.



4

These biomarkers are used to help researchers predict the prognosis of the tumour type and how it can be treated.



5

Biomarkers are also used to identify possible new drug targets and treatments for high-grade brain tumours.



## Future Patients

The creation of the BTIS will assist in assessing, diagnosing and tailoring treatments for future patients, in addition to improving clinicians’ overall understanding of brain tumour biology.

For more information visit: [www.btis.ie](http://www.btis.ie)

### About Beaumont Hospital

Beaumont Hospital is a large academic teaching hospital. In addition to being a Designated Cancer Centre, it is also the National Referral Centre for Neurosurgery and Neurology.

### About Genomics Medicine Ireland

Genomics Medicine Ireland (GMI) is a private life sciences company leading research studies across the island of Ireland that examine the relationship between genetics, health and disease. GMI works in collaboration with clinicians, patients,

academic researchers and global biotech and pharmaceutical sectors to discover pathways to new treatments and new diagnostics for people both here in Ireland and around the world.

The company also operates Ireland’s largest genomics laboratory which conducts state-of-the-art sequencing and sample processing. GMI is a subsidiary of global genomics company, WuXi NextCODE, headquartered in Cambridge, USA, and is also supported by the Ireland Strategic Investment Fund. [www.genomicsmed.ie](http://www.genomicsmed.ie)