

Glioblastoma Clinicogenomics Data

Description

ASCO has collaborated with Tempus to make a cohort of glioblastoma patient data available to healthcare researchers. Tempus is a precision medicine company dedicated to improving healthcare by making its proprietary genomic sequencing, analytics, and clinical decision support technology available to physicians, researchers, and others, in part by maintaining certain oncology related data sets.

A dataset of 500 molecular and clinically matched Glioblastoma patients is available to the academic research community:

- Glioblastoma Clinical Data Available:
 - Tempus typically structures the following data fields to the extent available in a clean format from clinical records: demographics; diagnoses, assessments, labs and molecular pathology; treatment; and, outcomes.
- DNA Testing: Either a 648 gene panel or whole exome panel focused on potentially actionable mutations by DNA sequencing per patient.
 - SNVs (single nucleotide variants), indels, and copy number variants are detected.
 - Genomic rearrangements are detected on a gene subset by DNA Sequencing (others detected by RNA Seq).
 - Microsatellite instability status and tumor mutational burden are included in the report.
 - Coverage between ~150x to ~500x
- Full transcriptome by RNA sequencing
 - Unbiased gene rearrangement detection from fusion transcripts and expression changes.
 - Sequenced at a minimum of 25 million reads, average 50 million reads

Why is this data important; what makes it unique?

The availability of clinical data paired with DNA and RNA sequencing for such a large cohort of glioblastoma patients is truly unique. By providing access to the academic research community, Tempus and ASCO hope to drive innovation in treatment strategy of the disease.

Is the data available elsewhere?

This is an ASCO data source and not available elsewhere.

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Design

This is a cohort of patients, with a diagnosis of malignant glioblastoma who had genomic testing performed by TEMPUS. Many of these patients were diagnosed after 2016. Follow-up information on patients varies, based on patient outcome and how long they were treated at practices contributing information.

Variables

Categories include diagnosis, risk factors, treatment, clinical outcomes (including progression and death), clinical assessments, and labs and molecular pathology. Please see the **Clinical Data Fields** document for more specific information. (Note that the TEMPUS data structure is used for all cancer types and some fields (e.g. date of metastatic disease) may not be included if not relevant for glioblastoma patients.)

Sample Size/Number of Respondents

The dataset includes clinical and genomic data for 500 patients.

Data Formats

The clinical data tables are in a Comma Separated Value (CSV) file format. The molecular data is available in BAM's, VCF's, BAI's and CSV's.

Limitations

- The dataset is de-identified using the Safe Harbor method. Each patient's dates are indexed against their earliest date in the dataset, then provided as intervals thereof. The index date is shifted in order to prevent patient re-identification.
- Data fields are subject to availability for each patient.

Data Dictionary

Please see the Clinical Data Fields document.

Sample Data

See sample dataset.