DIPG-71 - xPedite: A Study to Expedite DIPG and DMG research

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Abstract

Background: Diffuse midline glioma (DMG), particularly the subtype known as diffuse intrinsic pontine glioma (DIPG), poses a significant challenge due to its aggressive nature and low survival rates, especially in children. Despite ongoing research and clinical trials, the survival rate remains alarmingly low. The scarcity of cases and siloed nature of current registry efforts have hindered the establishment of a reliable natural disease history for benchmarking studies and led to the need for randomization in clinical trials.
Methods: xPedite (NCT06140719) is a fully virtual, patient-driven, nationwide, real-time observational study to collect, annotate, standardize, and report the critical data elements of DMG and DIPG in a regulatory-compliant framework. Patients of any age can join via electronic consent, with recruitment supported by provider referrals and patient advocacy organizations DDRFA and My DIPG Navigator. Medical records are accessed from institutions, sequencing vendors, and health information networks. Notably, data elements are annotated comprehensively and longitudinally in a 21 CFR Part 11-compliant clinical database by xCures remote study staff, eliminating the need for data entry by treating site staff or physicians. Data collected include anti-cancer interventions, non-cancer medications, biomarker results, radiological endpoints, steroid use, vitals, demographics, raw DICOM images, and genomics. In addition to clinical data, patient- and caregiver-reported outcome questionnaires (PROs) and video assessments of mobility and neurological status are collected for clinician review. The objective of the study is to collect these clinical, imaging, biomarker, and assessment data in a manner suitable to provide to health authorities to reduce randomization in future trials. In a commitment to scientific understanding and collaborative research, the data collected through the xPedite study is openly available to academic, government, and non-profit researchers. As of June 2024, 192 patients were enrolled in xPedite. Real-time enrollment and data statistics are available at https://xcures.com/dmgdashboard/.

Outcomes and Inclusion/Exclusion Criteria

Primary Outcome Measure:

- Overall Survival (OS) [Time Frame: 12 months]
  - OS is defined as time from first dose of treatment to death due to any cause.

Secondary Outcome Measures:

- Objective Response Rate (ORR) [Time Frame: 12 months]
  - ORR is defined as the proportion of patients with a documented complete response (CR) or partial response (PR) as assessed by RANO or RAPNO.
- Clinical Benefit Rate (CBR) [Time Frame: 12 months]
  - CBR defined as the proportion of patients with a best overall response of complete response (CR), partial response (PR), or stable disease (SD) as assessed by RANO or RAPNO

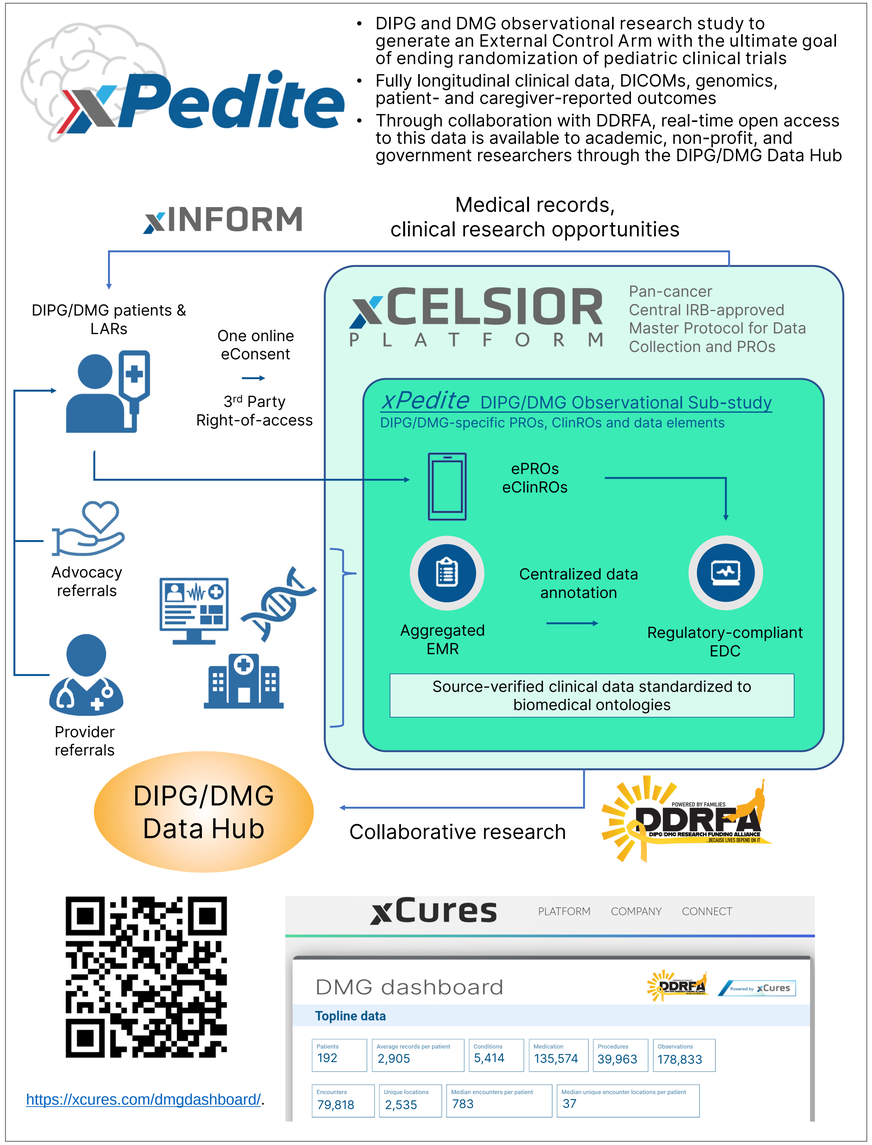
Inclusion Criteria:

1. Diagnosis of diffuse midline glioma according to the WHO 2021 Classification of Tumors of the Central Nervous System diagnostic criteria including diffuse intrinsic pontine glioma (DIPG). In the absence of a pathologically confirmed diagnosis, a grade IV glioma involving the thalamus, hypothalamus, brainstem, cerebellum, midbrain, or spinal cord, or with a pontine epicenter and diffuse involvement of the pons.
2. Patients with any performance status, comorbidity or disease severity are eligible
3. Patients or their legally-authorized representative must be willing and able to provide electronic, informed consent (and assent, if applicable)
4. Informed consent obtained for the XCELSIOR longitudinal outcomes registry (NCT03793088).
5. Patients must be a resident of or receiving care within the United States or US territories.

Exclusion Criteria:

1. Patient or legally-authorized representative is unable to provide informed consent.
2. Patient or caregiver is unable to complete the PRO and ClinRO by an electronic platform.

Graphical Summary



Current enrollment

192 Patients enrolled

855 DICOMs collected

~3K Medical records/patient

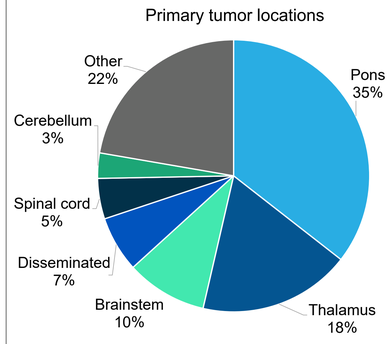
Median date of diagnosis = 10/5/2019

132 DMG

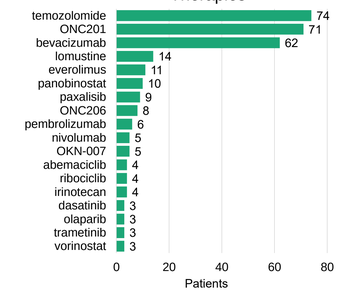
60 DIPG

Encounter locations

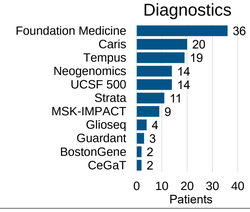
Primary tumor locations



Therapies



Diagnostics



111 Confirmed H3K27M

95 Somatic NGS

Next steps

For patients and caregivers:

- Learn more about the initiative by visiting DIPG-ONE Link, make an xINFORM account, and sign the xCELSIOR eConsent
- Enroll in the central IRB-approved master observational protocol xCELSIOR for screening and consideration for xPedite

https://dipg-onelink.org/xINFORM

For clinicians and researchers:

- Refer patients to the protocol via DIPG-ONE Link
- Request data access by contacting xCures at: medical-affairs@xcures.com