



Pregnancy Outcomes Following Bone Marrow Transplant +/- Total Body Irradiation: interim results of a prospective UKOSS observational study

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Objective:

- Female childhood cancer survivors have an increased risk for poor pregnancy outcomes, including preterm birth (PTB). However, relatively little is known about pregnancy outcomes specifically for women treated with bone marrow transplant (BMT) +/- total body irradiation (TBI), and management is likely variable across the UK. Preconception counselling and early referral to high-risk PTB prevention clinics (PTBPC) may improve outcomes. The UK Obstetric Surveillance System (UKOSS) was developed to investigate uncommon disorders of pregnancy.
- We are jointly funded by Action Medical Research/Borne to determine:
 - The current care offered to women who conceive following BMT +/- TBI
 - The incidence of adverse pregnancy outcomes for these women
- To be achieved via:
 - A prospective observational study via the UKOSS
 - A national survey of clinicians
 - A retrospective data linkage study of two key datasets

Here, we report on the prospective observational study.

Design: Prospective observational study

Method: Pregnant women with a history of BMT +/- TBI were identified through the UKOSS between 1st January 2020 and 31st December 2022 (including a 12-month extension due to the pandemic). Data was submitted via data collection forms by UKOSS reporters local to nationwide (UK) consultant-led maternity units.

Results:

42 pregnancies where the woman had a history of BMT were reported during the time period. We have performed an interim analysis on the first 33 pregnancies (data from the most recently reported pregnancies are yet to be released):

- TBI:**
 - 18/33 unknown if had TBI
 - 8/33 known TBI
 - 7/33 no TBI
- 3/33 had previous poor obstetric history recorded
- Mode of birth:**
 - 13/33 spontaneous vaginal birth
 - 6/33 emergency Caesarean section
 - 4/33 assisted vaginal birth
 - 3/33 elective Caesarean section
 - 7/33 not yet recorded
- Gestational age at birth:**
 - Majority (24/33) birthed at term (≥ 37 weeks' gestation)
 - 3/33 pregnancies resulted in miscarriage
 - 2/8 of the known TBI group
 - 1/18 in the "unknown" TBI group
 - 2 born preterm
 - 0/8 in known TBI group

Conclusions:

- Our initial data suggest that BMT alone does not worsen pregnancy outcomes, however a history of TBI may increase the risk for early pregnancy loss
- We will publish the findings of the full dataset shortly, the results of which will be useful for pre-pregnancy counselling and antenatal management