**PRIMROSE: A national trainee collaborative-led, multicentre prospective audit on the care of breast cancer patients with central nervous system disease in the UK**

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**BACKGROUND**
- Brain metastasis (BM) from breast cancer (BC) is an increasing clinical problem that is associated with a poor prognosis.
- *Only a minority of patients survive >1 year*
- Treatment options include surgery, stereotactic and whole brain radiotherapy and systemic therapies.
- Currently a lack of information about *prevalence, survival and management* in the UK

**STUDY OBJECTIVES**
1. Define the incidence of metastatic BC with central nervous system (CNS) involvement such as brain metastasis & leptomeningeal disease
2. Describe current practice in diagnosis and management
3. Evaluate outcomes of patients with BC-related CNS metastases in the UK

**STUDY ENDPOINTS**
**Primary:**
- Overall survival from initial BM diagnosis.

**Secondary and Exploratory Endpoints include:**
- Time to initial CNS involvement from initial diagnosis
- Therapeutic interventions for BM;
- Overall survival from metastatic BC diagnosis;
- Cause of death: progressive CNS disease vs. progressive extracranial disease.

**STUDY OPERATIONS**
- All UK hospitals can register, *currently > 25 active centers*
- Study sites cover major cancer centers:
  - Barts, Imperial, UCL/Queens Square, Birmingham, Coventry, Stoke, Southampton, Oxford, Cardiff, Liverpool, Manchester, Preston, Sheffield, Belfast, Plymouth/Derriford, Nottingham, Brighton, Guildford, Edinburgh, Glasgow & Dundee
- Study sites will register the audit locally according to Trust guidelines.
- Data collection is led by trainees/early career consultants across various specialties, including medical oncology, clinical oncology, histopathology, palliative care and neurosurgery
- Promotion via the UK Breast Cancer Trainees Research Collaborative Group and British Neurosurgical Trainee Research Collaborative (BNTRC)

**CURRENT STATUS**
- Study officially opened in Jan 2020
- Significant delays in activity between March to June due to COVID-19
- Trainee network has rapidly expanded and now includes nearly all regions of the UK
  - Including Northern Ireland, Wales & Scotland
  - Some regions of England would benefit from improved coverage
- Additional centers’ coming online as local audit approval received (Figure 1)
- Lead representatives for different regions have been appointed to coordinate data entry
- Promotion of collaborative at National and International conferences including:
  - UK Oncology Forum
  - San Antonio Breast Cancer Symposium

**GET INVOLVED**
- Actively looking for regional trainee leads, trainee collaborators and more study sites for:
  - Yorkshire & the Humber
  - East of England
  - North East England

**Fig 1. Regional distribution of data collection hubs currently involved in PRIMROSE.**

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