

Developing a Translational Research Programme in Ovarian Cancer in a Tertiary Referral Centre in Eastern India

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Introduction:

- The experience of the established Gynaecological Oncology Centres in the UK can have a massive impact in dissemination of knowledge and setting up of services/research globally.
- ➤ UKIERI (UK India Education research Initiative) jointly funded by Department of Science and Technology (DST, Govt. of India) and the British Council has fostered bilateral exchange of knowledge and skills towards improving women's cancer care in Eastern India.

Aims and Methods:

We describe our model of developing a training and research programme in Gynaecological Oncology at Tata Medical Center, Kolkata, a tertiary referral centre in Eastern India through an exchange programme focussing on the following research areas:

- Quality improvement in ovarian cancer cytoreductive surgery
- Human resources development
- Social sciences- economics and quality of life
- Education and training- medical/basic science/ data management and trials
- Translational Research

Funding obtained through the British Council- DST India collaborative research grant UKIERI and UICC technical fellowships.

Results: Impact

- A research team comprised of 25 members including specialist nurses, medical social workers, data managers, clinical trial co-ordinators, basic science and clinical researchers was developed through a joint mentoring scheme.
- Clinical database linked with research database
- Clinical research matched with clinic to bench translational studies



 Translational research programme in Ovarian cancer (PROVAT) was established focussing in the theme on homologous recombination status in epithelial ovarian cancer

- TMC Kolkata (Asima Mukhopadhyay)
- Royal Cornwall Hospitals, Truro (William Helm)
 Bart's Health NHS, London (Ranjit Manchanda)
- Newcastle University (Nicola Curtin)
- Developing functional biomarker for HR (immunofluorescence)- functional studies in ascites/solids/ Immunohistochemistry
- **❖** Developing surgical /clinical data collection tools to correlate with tumour biology
- **❖** Developing preclinical studies on HR inhibitors in patient samples
- **❖**Setting up clinical trials in patients with BRCA1/2 germline mutations in India including socio-economic studies on population testing/acceptability
- **❖**Capacity building for a clinical academic team for gynaecological cancers in India

PROVAT (Project Ovarian Tumour Translational, 2016)

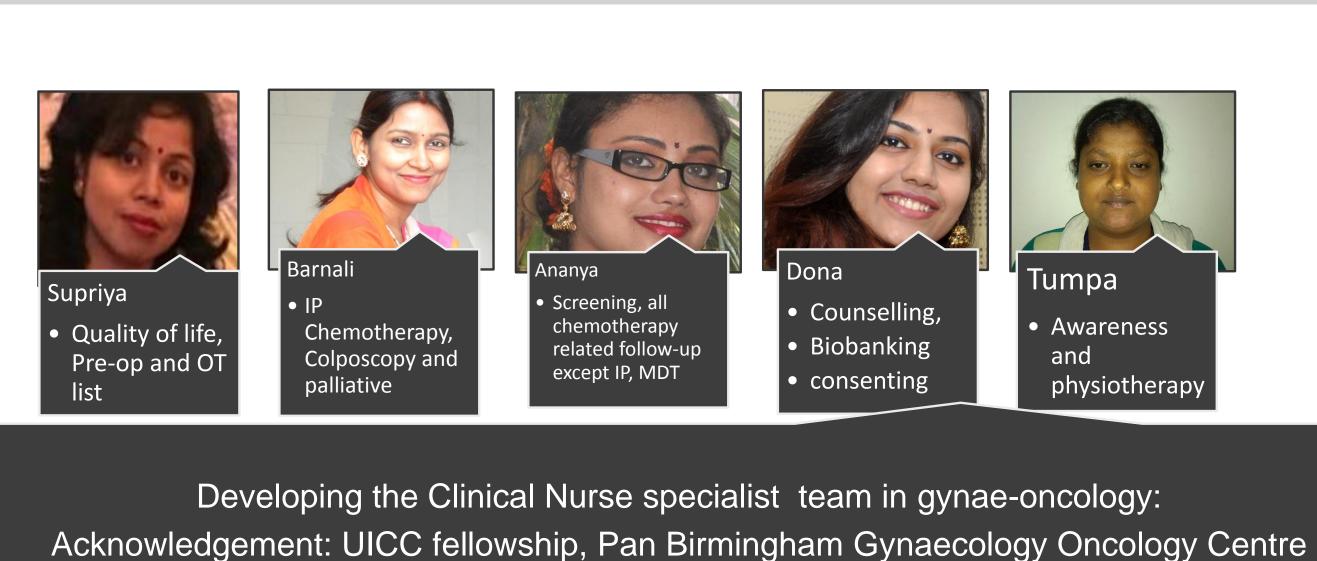
Central theme: Homologous recombination (HRD 50%, HRC 50%) Mukhopadhyay at al, 2010, 2012



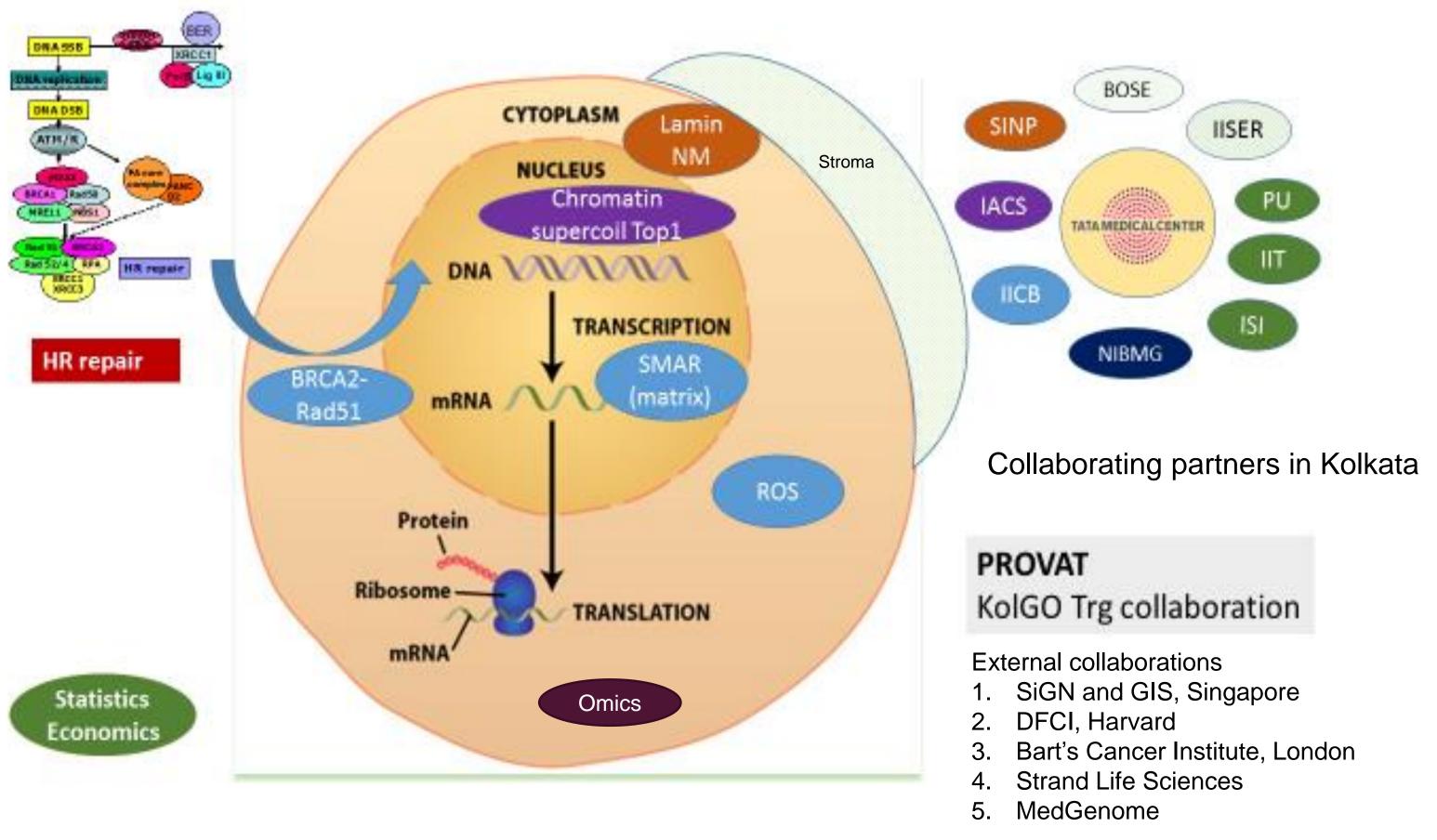
- PROVAT 1: HR and surgical resistance PROVAT 10: Novel molecules/ PROVAT 2: HR, Chemotherapy and Phase I CTU resistance and CSC/EMT Social sciences PROVAT 3: ROS modulation PROVAT 9: Vasculature, & HR inhibitors immune and inflammation PROVAT PROVAT8: HR & PROVAT 4: cytosol/nuclear interface Hyperthermia and HR Clinics PROVAT 5 PROVAT 7: Other DDR/ signalling Preclinical model and PDX pathways/phenotypes Technological platforms
- Kolkata Gynecological Oncology Trials and Translational Research Group- KolGo Trg was established by the author including 3 major cancer centres in Kolkata with a view to participate in GCIG International clinical trials:
- 1st trial- INTERLACE, all 3 centres have obtained CCRN accreditation

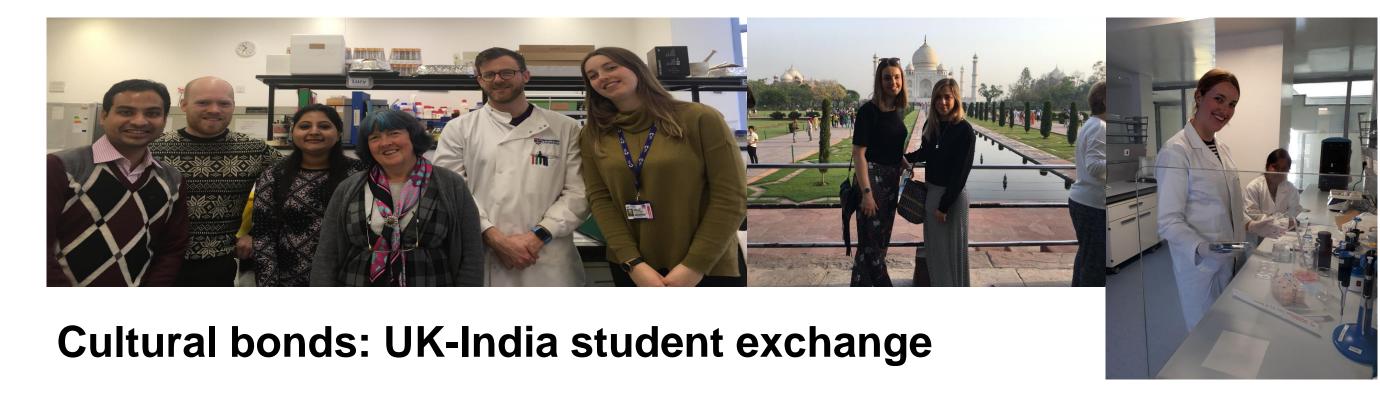
Contributing to International data sets:

- -SOCQER-2 study- Dr Sudha Sundar, Birmingham University
- Chemotherapy response score multi-centric study data-Dr Naveena Singh, Bart's Health NHS UK
- Asian peritoneal Surface Malignancy dataset- NCCS, Singapore



PROVAT 6: Biomarker
Functional HR vs proteo-genomic/IHC
Liquid biopsy microRNA/ exosome/ CtDNA





Conclusions:

UKIERI provided a platform for long standing collaborative research and development in gynaecological oncology in India









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