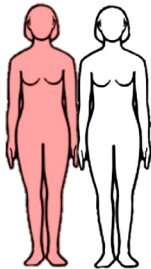


Healthy women
High risk low risk



Primary cancer



Treatment

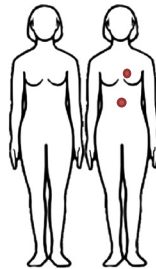


Remission



Outcome

Cure Metastasis



Resistance



SAMPLES

Blood /genomic DNA
Normal breast tissue

Tumour -FNA/TMA
Blood - ctDNA, CTC,
metabolomics
Marrow biopsy - DTC
Multimodality imaging

Male/female
Ethnically diverse
Pre/post menopausal

Metastases
Blood - ctDNA, CTC,
Metabolomics
Multimodality imaging

OUTPUT

- Biomarkers of risk
- Effects of lifestyle changes/interventions
- Early detection

- Molecular subtypes/staging
- Known biomarkers (ER, HER2 etc)
- Diagnostic biomarkers
- Prognostic biomarkers
- Response biomarkers
- Treatment toxicity biomarkers
- New cell lines and PDX

- Progression biomarkers
- Changes in ER/HER2 etc
- Metastasis genes
- 'Organotropism' genes
- Resistance biomarkers
- New therapeutic targets
- New cell lines and PDX