**Lay Description of Important Outcomes**

**1. Breast Cancer Spread to Bones**:

* + Investigating proteins involved in breast cancer spreading to bones.
  + Found that high levels of GFRAL in breast cancer cells are linked to bone metastasis.
  + Studying how GFRAL affects bone metastasis using specialized cell lines.

1. **GFRAL's Connection to IL17A and Bone Environment**:
   * GFRAL might influence bone environment through IL17A.
   * Suggests a potential pathway for bone metastasis development.
2. **Breast Cancer Cells Influence Bone Cells through GDF15**:
   * Breast cancer cells with high GFRAL levels can stimulate bone cells to produce more GDF15.
   * GDF15 might aid cancer growth in bones.

Clinical relevance of findings i.e., upcoming/in progress trials, impact on MBC treatment (now or future)

* + Evaluating treatment effectiveness in mice with breast cancer tumors, focusing on GFRAL's role.
  + Studying how breast cancer spreads to bones in mice in respect to GDF15 and GFRAL.
  + Monitoring cancer spread to bones using imaging.