**BACKGROUND**

- GPNMB is an intracellular transmembrane glycoprotein overexpressed in ~40% of breast cancer as well as other tumor types.
- Promotes migration, invasion, and metastasis of breast cancer cells.
- GPNMB is overexpressed in triple negative breast cancer (TNBC) associated with poor patient outcomes.
- High tumor GPNMB expression has been correlated with poor patient outcomes.

**AIMS**

- To evaluate the safety and efficacy of a novel CDX-targeted antibody-drug conjugate CDX-011.

**METHODS**

- Single-arm phase I/II study in advanced, heavily pretreated breast cancer patients.
- Eligibility required GPNMB expression in ≥5% of epithelial and/or stromal cells.
- CDX-011 is a humanized antibody

- **Tumor burden ≥10 mm**
- **≥5% GPNMB expression**
- **5 mL or greater in 2 of 4 target lesions**

**HUMAN SUBJECTS**

- Total number of patients who received CDX-011: 41.

**Endpoints**

- **Primary end point**
  - Response rate (confirmed/unconfirmed) = ~20% and median overall survival (OS) > 10 months.

**TREATMENT EXPANSION**

- **Response rate**
  - **15%**

**ADVERSE EVENTS**

- **Toxicity**
  - **Grade 1/2**

**CONCLUSIONS**

- CDX-011 was well tolerated.
- Promising activity in triple negative breast cancer (TNBC), with significant tumor regression and OS benefits.
- Phase III study is ongoing.

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**Graphs and Tables**

- **Graphs**
  - CDX-011 efficacy in TNBC patients.
  - Toxicity profile.

- **Tables**
  - Patient characteristics.
  - Tumor response.
  - Adverse events.

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**Abbreviations**

- CDX: humanized anti-CDX antibody
- IC: investigator's choice
- MMAE: monomethyl auristatin E
- OS: overall survival
- PFS: progression-free survival
- TNBC: triple negative breast cancer
- TMZ: temozolomide

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**References**

- Cited in the text.
- Additional references available upon request.