Personalized circulating tumor DNA testing for detection of progression and treatment response monitoring in patients with metastatic invasive lobular carcinoma

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Background

- Metastatic invasive lobular carcinoma (mILC) presents unique clinical challenges and can be difficult to monitor radiographically.
- More accurate biomarkers are needed for real-time assessment of response to treatment.
- This real-world study demonstrates the feasibility of longitudinal ctDNA testing for treatment response monitoring in patients with mILC.

Methods

- Longitudinal plasma samples (n=333) were collected from 66 patients with mILC treated between 5/20/21 and 10/4/23.
- A personalized, tumor-informed assay (Signature™, Natera, Inc.) was used for the detection and quantification of ctDNA in plasma samples.

Figure 1. Signature workflow

Figure 2. Genomic alterations detected by whole exome sequencing

Figure 3. ctDNA detection rate and association of on-treatment ctDNA dynamics with clinical benefit

Figure 4. Prognostic value of ctDNA testing in patients with mILC receiving treatment

Figure 5. Patient-specific changes in ctDNA levels in response to treatment

Conclusions

- ctDNA detection and dynamics correlated with clinical status determined by conventional monitoring tools in mILC patients.
- Personalized, longitudinal ctDNA testing may have utility in detecting progression and monitoring treatment response in patients with mILC.

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