Uptregulation of Immune Response Biomarkers by Ribociclib Plus Endocrine Therapy in Paired Tumor Samples From Phase I Studies

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INTRODUCTION
• Ribociclib (RIB) is a CDK4/6 inhibitor that has demonstrated antitumor activity in patients with breast cancer.
• CDK4/6 inhibition is thought to disrupt cell cycle regulation, which results in cell cycle arrest and subsequent cell death.

METHODOLOGY
• Gene expression analysis was performed using paired biopsies from 12 patients who were enrolled in the phase I dose-escalation study of ribociclib in combination with endocrine therapy (CT) in hormone receptor–positive breast cancer patients.
• Patients were treated with CT, followed by RIB + ET (LET, tamoxifen + goserelin, or fulvestrant) in the dose-expansion phase for patients with confirmed disease stabilization or clinical benefit.

RESULTS
• Gene expression analysis was performed on patients from 2 phase I clinical trials of RIB + ET in MBC using paired biopsies from baseline C1D15.
• Pairwise differential gene expression at baseline and C1D15 by BOR is shown in Figure 1.
• A similar trend was observed for individual genes within the T-cell–inflamed signature by clinical benefit (Figure 2).
• Significant upregulation of T-cell infiltration gene signature with RIB + ET was observed.

Discussion
• The sample size used in this analysis was small, and thus is considered exploratory.
• Additional studies are needed to confirm the findings.

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References