Goals: Use of the Oncotype DX® breast cancer assay is supported by international guidelines. The assay has been shown to provide prognostic and predictive information beyond standard parameters in estrogen receptor positive (ER+) disease. Several studies from the US, Europe, Japan and Australia showed consistent results on its impact on adjuvant clinical decision making. There are no data on its use in clinical practice from a Middle Eastern country.

Methods: We performed a retrospective analysis of all patients (pts) with ER+, HER2-negative node-negative invasive early breast cancer tested with the assay in our institution. Adjuvant treatment recommendations supported by the Recurrence Score result were compared with those that would have been taken based on clinical and pathological criteria (St. Gallen criteria).

Results: 50 women with a median age of 49 years (range 25–71) were included. Tumor size was <2 cm in 25 and >2 cm in 12 pts (range 0.6–4 cm). The assay could not be performed in 3 pts leaving 47 women (25 pre-, 22 postmenopausal pts) for analysis: 25 (53%) pts had low, 20 (43%) intermediate and 2 (4%) high Recurrence Score values. Overall, the Recurrence Score result led to a change in the risk category in 23 (48%) pts: a lower risk in 15 pts and a higher risk in 8 pts. Of 30 pts with intermediate risk by the St. Gallen criteria risk was upgraded to high in 2 pts and downgraded to low in 14 pts by the Recurrence Score result. Compared to treatment recommendations based on clinicopathological criteria recommendations changed in 14 (30%) cases: in 11 (23%) from chemoendocrine to endocrine therapy and in 3 (7%) from endocrine to chemoendocrine therapy.

Conclusion: These are the first data on the impact of using the Oncotype DX® breast cancer assay in a Middle Eastern country. Using the assay was associated with a significant change in treatment decisions and an overall reduction of chemotherapy use. Data are consistent with those reported from the US, Europe, Japan and Australia. No significant relationships.