Editorial Commentary

OlympiAD trial: moving to a next level of treatment for patients with BRCA mutation and her2-negative metastatic breast cancer

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During the last 20 years, due to a widespread use of mammographic screening programs we witnessed a significant proliferation of early stage breast cancers (BCs) diagnosis, such as T1 lymph node-negative (1-4) that today represent the most frequently diagnosed invasive BCs in developed countries.

Nevertheless, up to 8% and 4% in American and European countries are still diagnosed in locally advanced or metastatic stage (5), which constitute a challenging field in modern oncology.

Metastatic patients are still struggling with median overall survival of 2–3 years and 5-year survival of <25% (6) whereas patients with metastatic, triple-negative breast cancer are facing a more serious challenge of median overall survival of <1 year (7).

Several improvements have been made, especially in BRCA germline mutation—metastatic setting, as reported in phase II studies with olaparib, an oral poly (ADP-ribose) polymerase inhibitor (PARPi) in combination with anthracycline and taxane regimens, that achieved a significant improvement in overall response and progression free survival (PFS) rates (8-10).

The first randomized, open- label, phase III trial comparing olaparib monotherapy to standard chemotherapy in patients with HER2-negative metastatic breast cancer carrying BRCA1/2 germline mutations was published by Robson and colleagues (OlympiAD trial), that reported promising results such as longer PFS and no significant difference in overall survival rates (11).

This milestone changed our clinical practice, transforming the triple negative breast cancer BRCA positive into a breast cancer subtype susceptible to a targeted therapy and as a consequence of these conclusions, olaparib was the first FDA approval PARPi for the treatment of patients with suspected deleterious or deleterious germline BRCA1/2 mutation, and HER2-negative metastatic breast cancer who have been treated with chemotherapy either in the neoadjuvant, adjuvant, or metastatic setting.

But furthermore than a modest absolute advantage in PFS (of about 2.8 months) current trials must ensure to this subtype of physical and mentally compromised patients a substantial improvement in their quality of life (QoL).

Therefore, the authors reprocessed their data and recently reported the impact of olaparib compared to chemotherapy on health-related quality of life (HRQoL) (11).

Despite an important rate of unavailable information, that may have biased the results of the assessments (questionnaire compliance and completion rates were lower

in the chemotherapy treatment of physician's choice arm) the available data clearly showed an advantage in HRQoL in patients treated with PARPi versus chemotherapy, besides for nausea and vomiting scores that were better in the latter group.

This reported point against olaparib must be analyzed in a bigger picture and faced in the context of multidisciplinary breast cancer units, where integrative and alternative therapeutic perspectives can make the difference, decreasing nausea and vomiting rates (12,13).

In conclusion, Robson's data showed that an innovative treatment with Olaparib, besides an improvement in PFS, in addition to intrinsically reduction of patients' hospitalization (oral therapy versus intravenous treatment) guarantees an improvement of QoL compared with chemotherapy.

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Footnote

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