DATA FROM THE REGISTRY PLATFORM OPAL

IMPLEMENTATION OF NEW TESTS AND TREATMENTS FOR PATIENTS WITH ADVANCED TRIPLE NEGATIVE BREAST CANCER IN ROUTINE CARE

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INTRODUCTION

Since 2019, new treatment options for patients with advanced triple negative breast cancer (TNBC) have been approved in the EU: PARP inhibitors for patients with BRCA-mutated BC and PD-L1 inhibitors for patients with PD-L1 positive BC. Furthermore, the antibody drug conjugate sacituzumab-govitecan was approved in November 2021. The OPAL registry platform was used to analyse the implementation of these new tests and treatments into routine care of patients with TNBC.

CONCLUSION

Our data show that PD-L1 testing and the new treatment option for PD-L1 positive tumors have been quickly implemented in routine care. BRCA1/2 testing is performed less often, especially in first-line situation. With longer follow-up, OPAL will show the impact of these new targeted therapies on the outcome in routine care.

METHODS

OPAL (NCT03417115) is a prospective clinical registry that continues the Tumor Registry Breast Cancer (TMK, NCT01351584, Fietz et al., 2017). Patients are prospectively recruited at start of their first systemic treatment for ABC. Follow-up continues until death or up to 5 years. There is no treatment specification. Detailed information on all (sequential) treatments, patient and tumor characteristics, physician-reported factors regarding treatment decision making, biomarker testing, outcomes (e.g. best response, progression-free and overall survival) are collected in a web-based data capture system with implemented checks for completeness and plausibility. Data are monitored by data management and on-site. Patient-reported outcomes (PROs) are collected at start of treatment and every 3 months thereafter. Patients can also give informed consent for their tumor samples to be used in future translational research (virtual biobank).

By August 2022, a total of 3849 patients with advanced BC had been recruited, of whom 1849 since start of OPAL (01/2018). Here data were analysed for 334 OPAL patients with TNBC.

RESULTS

Median age was 63 years at start of first-line treatment. 47% of patients had an ECOG performance status of ≥1. The tumor was already metastasized at diagnosis (M1) for 35% of patients. Metastases were mostly localized in lung (37%), bone (33%) and liver (25%) (**table 1**).

In first-line, several different regimes were used. Overall, most frequent first-line (n=334) regimens since 2018 were (nab)paclitaxel + atezolizumab (23%), (nab)paclitaxel ± bevacizumab (BEV) (23%), capecitabine ± BEV (19%), (nab) paclitaxel + carboplatin ± BEV (9%) and carboplatin + gemcitabine (3%) (**figure 1**). In total, carboplatin was part of 20% of all first-line regimens.

Second-line (n=140), mostly mono-chemotherapies were used. Overall, most frequent treatments were anthracyclines (15%), eribulin (15%) capecitabine (9%) and carboplatin + gemcitabine (8%, **figure 2**). Sacituzumab-govitecan was approved in November 2021 and was applied in 12 of 19 treatments in 2022.

For most patients, data on PD-L1 testing were available at time of database cut. Since 2018, the PD-L1 testing rate at start of first-line treatment has increased from 15% to over 70% in 2020-22 (**figure 3**). Out of 200 patients tested, 93 patients (47%) had a positive test result (**figure 4**). Since the approval of checkpoint inhibitor atezolizumab on 29th August 2019, 61 of 81 (74%) patients were treated with ATZ first-line.

The testing rate for BRCA1 and/or BRCA2 mutations was between 9-26% (**figure 3**). Out of 52 patients tested, 6 patients carried a mutation (**figure 4**) and two patients received a PARP-inhibitor in first-line treatment so far.

Prior to approval of ATZ, median PFS and OS was 6.4 months (95% CI 5.4-7.3) and 14.9 months (95% CI 12.3-18.4), respectively (previously published by the group, Fietz et al, 2017). After approval of ATZ, the majority of all TNBC patients were still alive at time of this analysis.

Table 1

Characteristic		
	N	**%**
Number of patients	334	100.0
	Median	**25-75% Quantile**
Median age at start of first-line	63.1	54.6 - 75.3
	n	**%**
ECOG Performance Status at inclusion		
ECOG 0	117	35.0
ECOG ≥1	156	46.7
Unknown/missing	61	18.3
Metastasis at diagnosis		
Yes (synchronous, M1)	117	35.0
No (metachronous, M0)	196	58.7
MX[a]/unknown/missing	21	6.3
Metastasis at start of first-line [b]		
Lung	125	37.4
Bone	109	32.6
Liver	85	25.4

ECOG: Eastern Cooperative Oncology Group.
a MX, presence of distant metastasis was not evaluated or is not documented für the time of primary diagnosis.
b Most frequent metastasis location at start of palliative 1st-line therapy (8 weeks before to 4 weeks after start of 1st-line treatment).

Table 1 Patient and tumor characteristics.

Figure 1

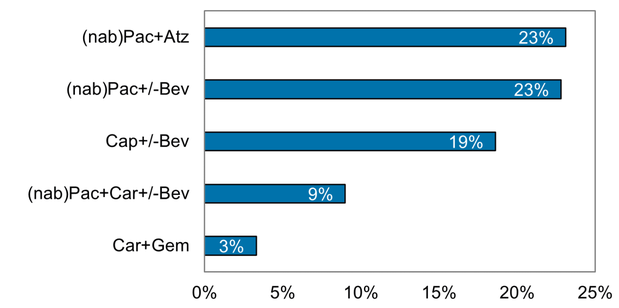

Figure 1 Most frequent first-line treatments (2018-2022)
Patients recruited at start of first-line between 01.01.2018 and 31.08.2022 (n=334)
Abbreviations: Bev, bevacizumab, Cap, capecitabine; Car, carboplatin; Gem, gemcitabine; (nab)Pac, nab-paclitaxel or paclitaxel.

Figure 2

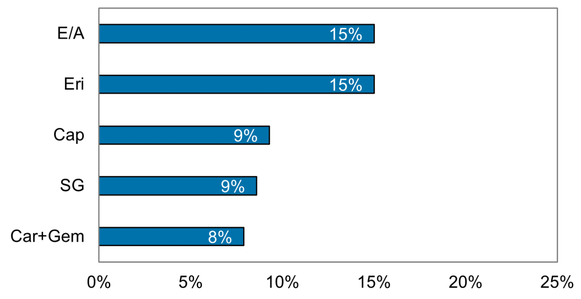

Figure 2 Most frequent second-line treatments (2018-2022)
Patients recruited at start of first-line between 01.01.2018 and 31.08.2022 and for whom start of second-line was documented at time of database cut 31.08.2022 (n=140).

Abbreviations: Cap, capecitabine; Car, carboplatin; E/A, anthracyclines (epirubicin/doxorubicin); Eri, eribulin; Gem, gemcitabine; SG, sacituzumab-govitecan

Figure 3

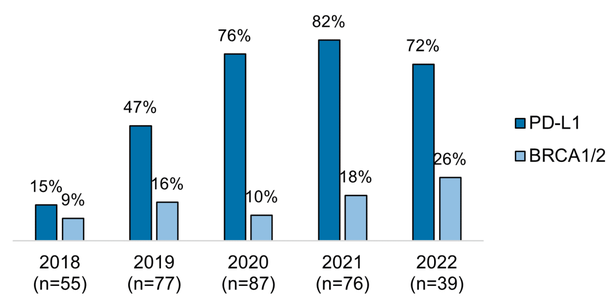

Figure 3 PD-L1 and BRCA1/2 testing rate

Figure 4

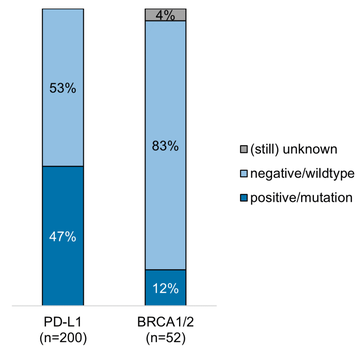

Figure 4 PD-L1 and BRCA1/2 test result
Number of patients who were tested for PD-L1 before/at start of first-line treatment: n=200.
Number of patients who were tested for BRCA1 and/or BRCA2 before/at start of first-line treatment: n=52.

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Fietz, T., Tesch, H., Rauh, J., Boller, E., Kruggel, L., Jänicke, M., Marschner, N., TMK-Group (Tumour Registry Breast Cancer), 2017. Palliative systemic therapy and overall survival of 1,395 patients with advanced breast cancer – Results from the prospective German TMK cohort study. Breast 34, 122–130. https://doi.org/10.1016/j.breast.2017.05.014

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