Impact of Out-Of-Pocket (OOP) cost on Breast Cancer (BC) treatment persistence in the US: A systematic literature review (SLR)

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Objective
To examine the association between OOP and treatment persistence among women with BC in the United States (US)

Conclusion
- The finding of SLR highlight a significant burden of OOP costs and/or co-payments leading to non-persistence among BC patients
- A reduction in OOP costs or subsidized OOPs may have a positive impact on persistence and survival outcomes among early stage BC (ESBC) or metastatic BC (mBC) patients
- The SLR advocates the need for further research on the impact of OOP cost on persistence and survival among BC patients

References

Methods
- The systematic literature review followed the standard methodology for conducting SLR as per guidelines provided by the National Institute for Health and Care Excellence (NICE)
- The results of this review were reported as per Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines

Results
- A PRISMA diagram for the screening process is presented in Fig 1
- Across the 351 citations retrieved, a total of five studies reporting the association between OOP cost and persistence among BC patients met the inclusion criteria. The sample size ranged from 197 [1] to 25,511 [2]

Figure 1: PRISMA diagram for the screening process

- The disease stage of included BC patients was early in four studies [1, 2, 4, 5], and metastatic in one study [3]
- The claims data of the analyzed patients were retrieved from databases such as Medco health solutions, IMS LifeLinkTM Health Plan, Blue Cross Blue Shield of Texas, or Medicare D enrollees

Figure 2: Prespecified PICOS eligibility criteria for selection of evidence

Figure 3: Forest plot of persistence and OOP cost across included studies

- Four studies reported a negative association between OOP cost and early-stage BC (ESBC) treatment persistence, i.e., persistence decreases with an increase in OOP cost [Fig 3] [1, 2, 4, 5]
- An increase in OOP cost from $0-$29.99 to ≥$300/month resulted in a significant reduction in the persistence to adjuvant hormonal therapy (AHT) among elderly women (OR 0.82) [5]. Another study reported a significant association between increasing AHT-specific OOP cost and non-persistence (p<0.0001) [4]
- Similarly, ESBC White, Black, and Hispanic patients (aged 65+ years) with OOP support through Medicare Part D Low-Income Subsidy reported significantly lower discontinuations compared to respective unsubsidized groups (p<0.001) [2]
- Further, a statistically significant increase in trastuzumab non-persistence (discontinuation) was reported with higher OOP cost among the metastatic BC (mBC) patients [HR vs. ≤$500: 1.62 for $2001-$4000; 1.88 for >$4000] [3]

- The SLR followed a standard two review and quality control process for data collection and extraction

Figure 3: Forest plot of persistence and OOP cost across included studies

Disclosure
SA, NK, and BS, the authors, declare that they have no conflict of interest

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