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The Influence of Health Plan Deductibles on Access to and Use of Treatments for Breast, Colorectal and Lung Cancer Patients

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Background

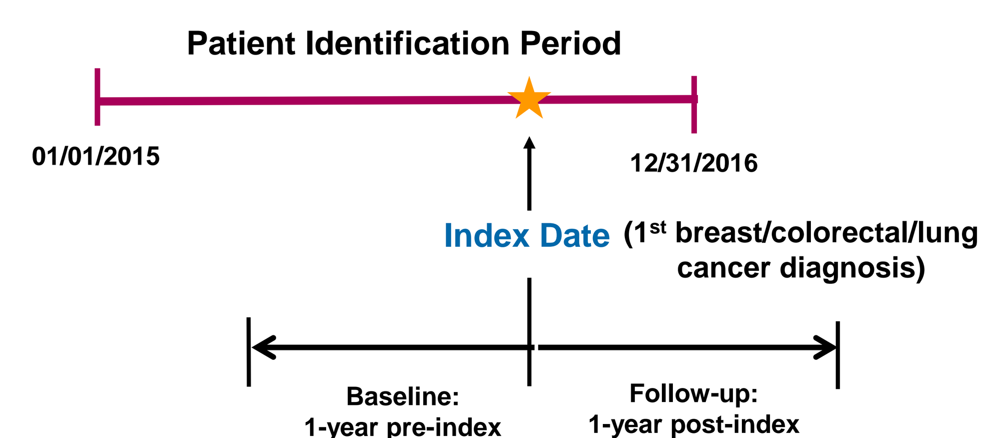
- Prior studies have indicated that patients with high deductible health plans (HDHPs) have been associated with lower levels of preventive care services and treatment utilization for chronic conditions[1].
- Out-of-pocket spend among cancer patients has increased with the emergence of novel treatment agents[2] and increased enrollment in HDHPs[3].
- Delayed cancer diagnosis or treatment is associated with bad outcomes[4] that are more immediate than those of delayed preventive care and chronic care treatment.

Objective

- To assess the association between health plan annual deductibles and the diagnostic and treatment patterns for breast, colorectal, and lung cancer patients.

Methods

- This retrospective observational cohort study used longitudinal US clinical data integrated from the Cancer Care Quality Program and administrative claims and social determinant data from the HealthCore Integrated Research Database (HIRD®).
- The study sample consisted of adult patients with a first breast, colorectal, or lung cancer diagnosis between 1/1/2015 and 12/31/2016 (index date) and who were continuously enrolled for 1 year prior to and after the index date.
- Two independent study cohorts were formed: high-deductible (Hi-D) and low-deductible (Low-D) patients whose health plan deductibles were >$1000 and <$500, respectively.
- Inverse probability treatment weights were created to adjust for confounding factors.
- Diagnostic and treatment patterns in the 1-year post-period were compared between cohorts.



Results

Figure 1. Pre-screening, pre-treatment imaging, and biopsy rates following initial diagnosis

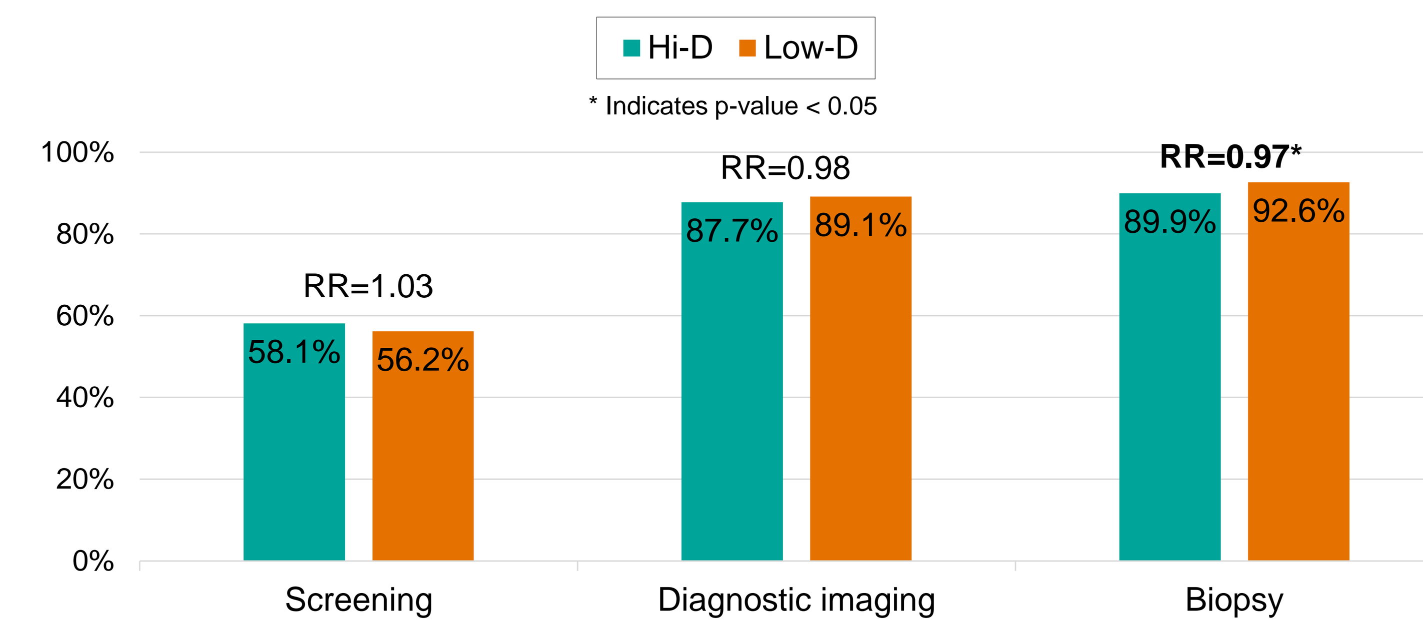


Figure 2. Initial cancer treatment utilization rates

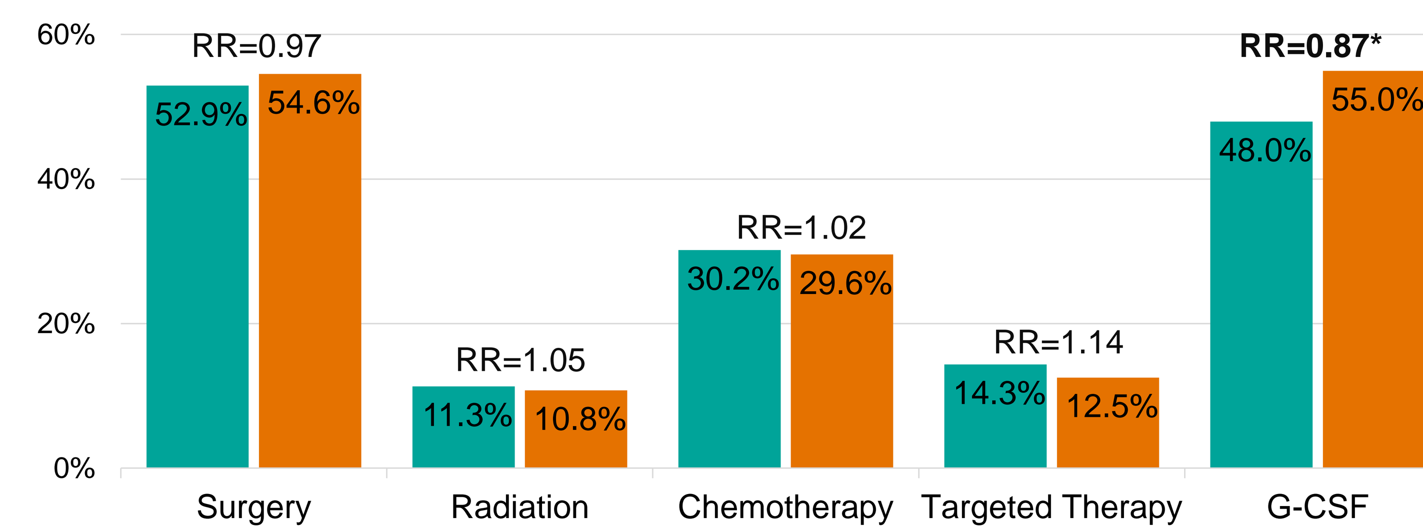
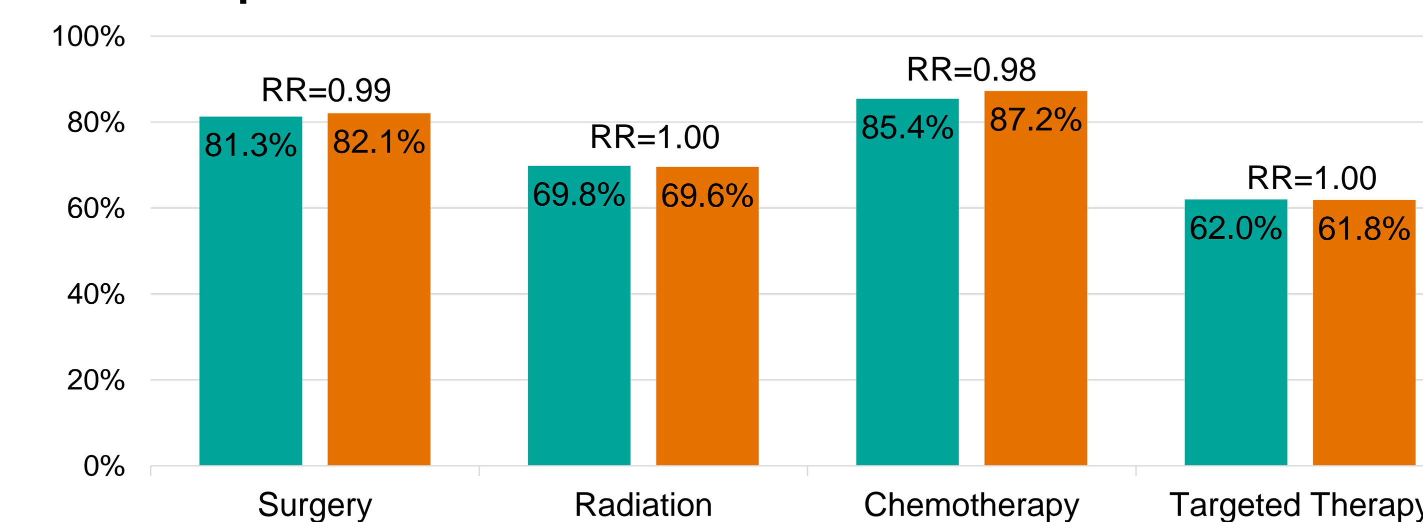


Figure 3. Cancer therapy utilization rates during the 1-year post-period



RR: Risk ratio; G-CSF: Granulocyte colony-stimulating factor.

Figure 4. All-cause healthcare resource utilization (average visit count)

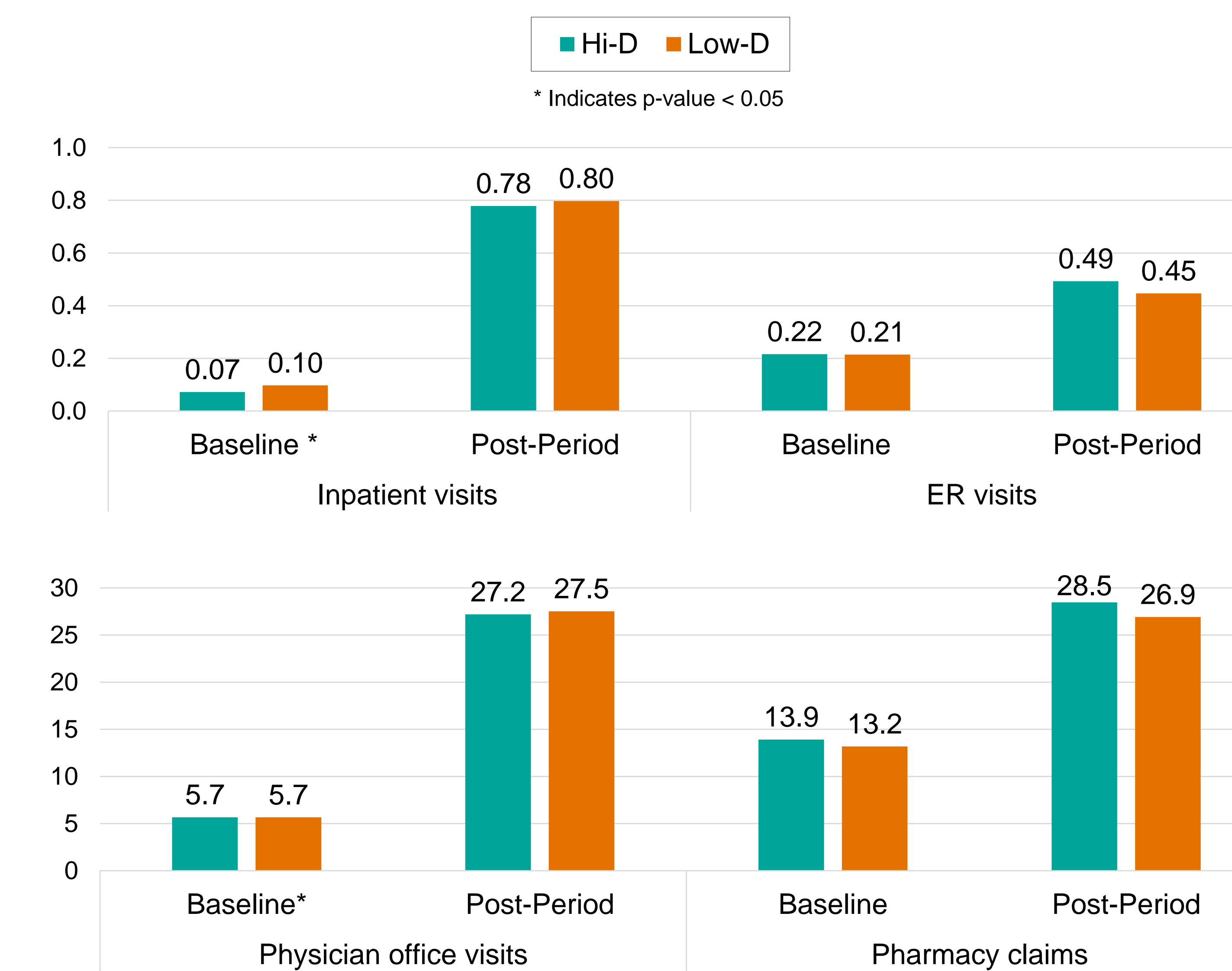
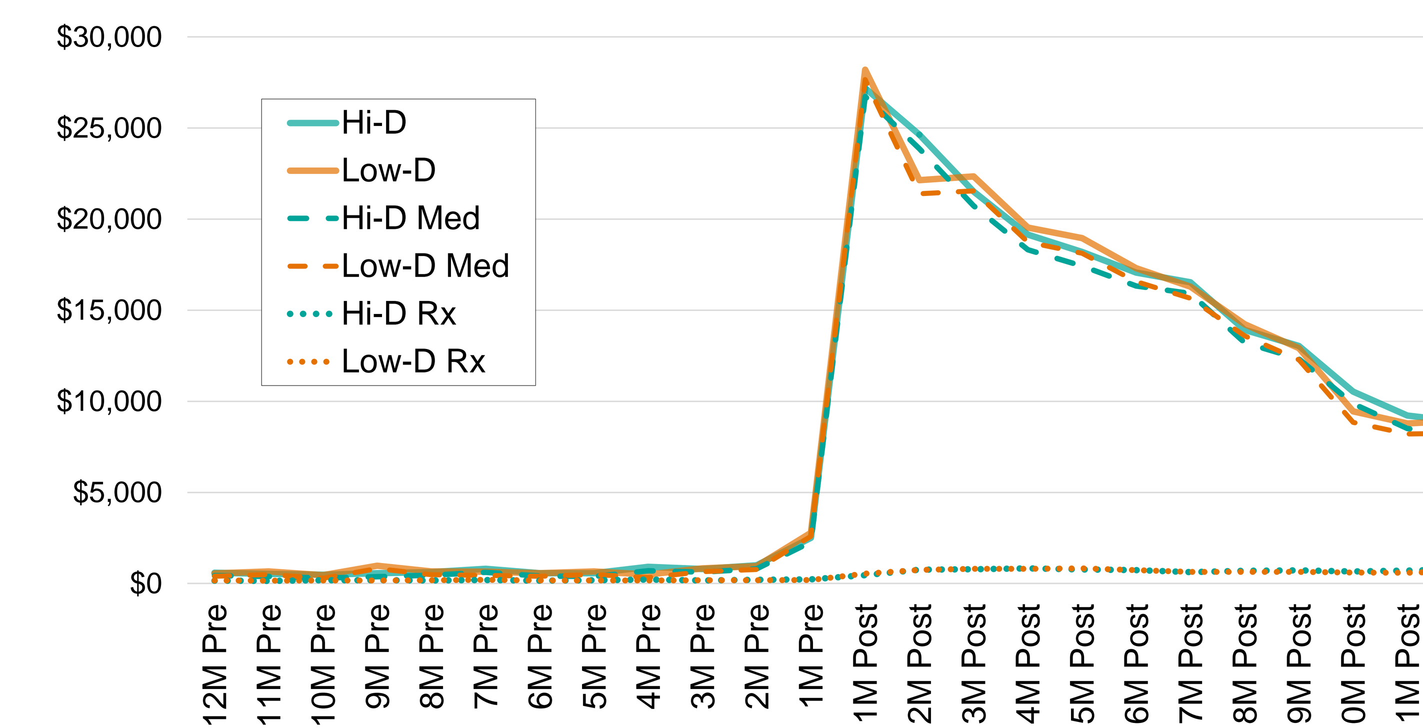


Figure 5. Healthcare costs trend over time



Findings

- Comparing Hi-D and Low-D patients, there were no differences in screening, diagnostic imaging, most initial therapies, any therapies during the 1-year post period, healthcare resource utilization, and healthcare expenditures.
- Hi-D patients were less likely to receive a biopsy and to incorporate G-CSF into 1st line of systemic chemotherapy and/or targeted therapy.

Conclusions

- Out-of-pocket cost sensitivity associated with HDHP enrollment may have less influence on the rate of healthcare resource use among patients with breast, colorectal, and lung cancers because the cost of delayed cancer care may have more immediate clinical significance than delayed preventive care and treatment of other chronic conditions.
- Breast, colorectal, and lung cancer patients reached deductibles limits very early within the first year following cancer diagnosis, and it is likely that moral hazard affects patients in both cohorts in a manner that results in similar healthcare resource utilization patterns after deductible limits are reached.

Disclosures and Acknowledgements

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