

When Screening Becomes Waste: Ovarian Cancer Testing in Asymptomatic Women

Authors: Nazish Nazki, Urvashi Sood

Key Highlights

The “Silent Killer” and the urge to screen



The current state of ovarian cancer screening



Key findings from the analysis



Conclusion: turning insight into action



Key takeaways for healthcare leaders



The “Silent Killer” and the Urge to Screen

Ovarian cancer is the deadliest gynecologic cancer and the 10th leading cause of cancer-related death among women in the United States, despite being relatively uncommon.

According to American Cancer Society estimates for the United States in 2025, about 20,890 women will receive a new diagnosis of ovarian cancer, and around 12,730 women will die from ovarian cancer.^{1,2} Ovarian cancer is often called the “silent killer” because it frequently goes undetected until it has reached an advanced stage. Despite advances in cancer therapy, the five-year survival rate for ovarian cancer remains significantly lower compared to other gynecologic cancers, largely due to late diagnosis.^{3,4} This reality often drives both clinicians and patients toward early detection efforts. However, large-scale evidence indicates that routine screening in asymptomatic women does not improve outcomes and may, in fact, cause harm.⁴

The U.S. Preventive Services Task Force (USPSTF) recommends against screening for ovarian cancer in asymptomatic women, assigning it a Grade D recommendation. A Grade D indicates moderate or high certainty that the service has no net benefit or that the harms outweigh potential benefits.⁴

The Current State of Ovarian Cancer Screening

Currently, there is no recommended routine screening test for ovarian cancer in average-risk women. The American College of Obstetricians and Gynecologists and the Society of Gynecologic Oncology emphasize that there is currently no effective early detection strategy proven to reduce mortality in average-risk women.⁵ Large clinical trials, including the PLCO (Prostate, Lung, Colorectal, and Ovarian) Cancer Screening Trial, have shown that such screening does not reduce mortality and often results in false positives, unnecessary surgery, overuse of resources, and related complications that are deemed to outweigh the benefits of screening.⁶ This reality has fueled demand for effective screening strategies. However, screening asymptomatic women for ovarian cancer remains controversial, and inappropriate use can lead to unnecessary interventions, anxiety, and increased healthcare costs.

Ovarian cancer screening is one of the many clinical measures included in the Milliman Health Waste Calculator (HWC), reflecting its importance as a target for optimizing care. The HWC is a leading analytics solution designed

to help health plans, providers, and payers identify, measure, and reduce low-value or wasteful healthcare services defined by national initiatives such as the U.S. Preventive Services Task Force and other published literature. It is a powerful analytics tool that helps identify low-value or potentially wasteful healthcare services, including inappropriate screening procedures.

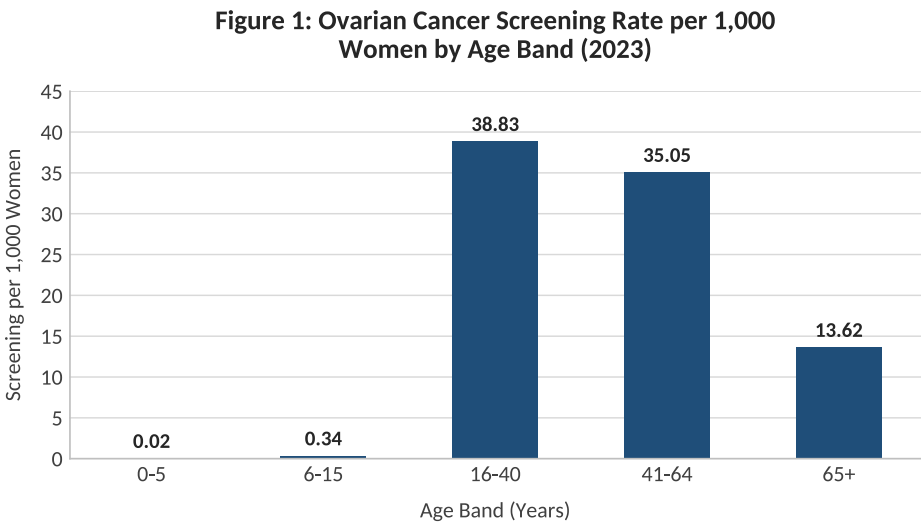
In this study, we utilized the HWC to identify individuals who received wasteful ovarian cancer screening services and examined trends in CA-125 and transvaginal ultrasound testing, along with related utilization patterns and costs for 2023. We analyzed a dataset comprising medical claims for over 88 million individuals, of whom approximately half were female. The data represent annual medical coverage across defined age cohorts and multiple sources of health benefit coverage, including 81% Commercial, 6% Medicare, and 13% Medicaid. This analysis evaluates patterns of ovarian cancer screening among asymptomatic, average-risk women, assessing alignment with evidence-based guidelines and examining the clinical and economic implications of observed practice variation.

Note: *In this claims-based analysis, “asymptomatic” refers to women without a clinical indication for ovarian cancer screening identifiable under the HWC measure logic; it does not imply absence of any symptom, chief complaint, or healthcare encounter.

Key Findings From the Analysis

Screening Utilization and Cost Burden – It is Concentrated

Claims data indicate substantial ovarian cancer screening activity across adult age groups, despite the absence of any recommended routine screening test for asymptomatic, average-risk women. When we examined screening rates per 1,000 members by age band, a clear pattern emerged, with women in their prime working years showing the highest screening rates, around 38.83 per 1,000 among ages 16–40 and 35.05 per 1,000 among ages 41–64, thus indicating that over one-third of women in these groups underwent screening. Given the large eligible populations, this corresponds to hundreds of thousands of screened members. The screening rate was lower but still notable among the **65+** age group (13.62 per 1,000). Screening among the young population **under age 16** (<1 per 1,000) was negligible and likely reflects rare clinical indications or coding anomalies.



Note: Rates represent number of women receiving ovarian cancer screening per 1,000 eligible women in 2023. Screening is defined using Milliman Health Waste Calculator.

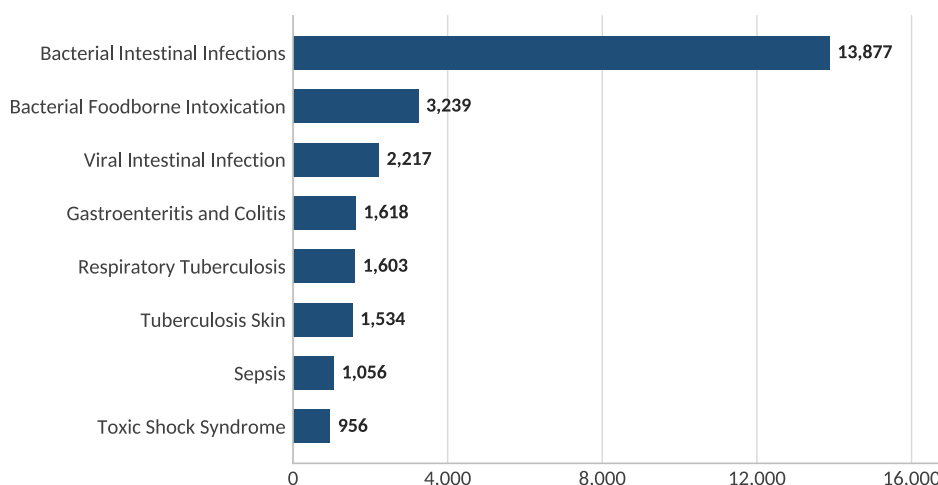
This means roughly 3-4% of commercially insured adult women in certain age bands received screening in a single year, despite evidence showing no mortality benefit for average-risk, asymptomatic populations.⁴

When translated into financial impact, these utilization patterns directly mirror the cost distribution. Spending on ovarian cancer screening is overwhelmingly concentrated among adult women, with ages 16–40 accounting for 52% of total costs and ages 41–64 contributing 44%. Together, these groups represent approximately 96% of total expenditures, amounting to about \$200 million, underscoring that the financial burden is driven primarily by screening in working-age populations. In contrast, individuals aged 65 and above account for only 4% (\$7-8 million) of costs, while those under 16 contribute less than 1% (\$0.2 million). Collectively, these findings highlight the significant clinical and financial impact of ovarian cancer screening concentrated within prime working-age groups.

The Clinical Story – Low Value Screening in Unrelated Infectious Conditions

The diagnostic profile of the ovarian cancer screening population was derived from analysis of HWC claims data, based on the most frequently observed diagnoses across claims for members identified as receiving wasteful screening within a defined timeframe. This profile was dominated by acute infectious conditions rather than symptoms suggestive of ovarian disease. The most common diagnoses were gastrointestinal infections, including bacterial intestinal infections, foodborne intoxication, viral intestinal infections, and infectious gastroenteritis. Serious systemic infections were also observed, such as respiratory tuberculosis, cutaneous tuberculosis, and sepsis. Most women receiving low-value screening had no documented high-risk indicators.

Figure 2: Frequent Diagnoses in the Wasteful Screening Population

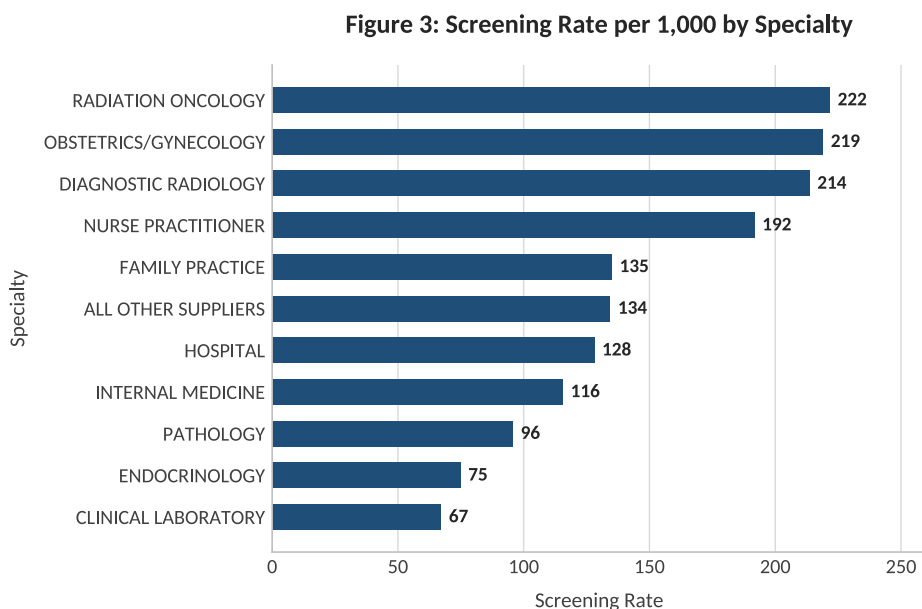


Overall, these findings indicate that ovarian cancer screening was frequently performed during encounters for unrelated acute illnesses. This pattern suggests opportunistic or routine testing rather than clinically indicated screening, accentuating the potential for low-value utilization in this population.

Screening Across the Care Continuum – Specialty Level Variation

When screening rates were stratified by specialty, activity was widely distributed across the care continuum rather than concentrated in OB/GYN alone. Among high-volume specialties, screening rates ranged from approximately 75 to over 200 screenings per 1,000 eligible women, nearly a threefold variation. OB/GYN and Radiation Oncology demonstrated similarly high screening intensity, while Pathology and Endocrinology showed substantially lower rates. This dispersion suggests that screening may be influenced as much by care setting and

workflow patterns as by specialty-specific clinical focus. These findings highlight meaningful practice variation and raise questions about the degree to which screening decisions are standardized versus opportunistic.



Conclusion: Turning Insight Into Action

Ovarian cancer screening in asymptomatic, average-risk women reflects a broader modern healthcare challenge: balancing the instinct for early detection with the imperative to avoid low-value care. The analysis highlights a persistent gap between evidence-based recommendations and real-world practice, with screening activity continuing despite strong evidence and national guidelines advising against routine screening in this population. Claims data show that screening and associated spend are concentrated in working-age women, while utilization is distributed across a wide range of clinical encounters, often unrelated to ovarian pathology, and varies substantially across provider specialties and care settings, from hospitals and diagnostic services to primary care and specialty practices, rather than occurring solely within OB/GYN. Closing this gap will require targeted, system-level interventions. Payers and provider organizations can begin by operationalizing claims analytics to routinely monitor services that have the potential to be low value, identify high-utilization settings, and prioritize areas for improvement. Tools such as the Milliman Health Waste Calculator can help organizations identify unnecessary screening, estimate its financial impact, and track trends over time, enabling prioritization of high-impact improvement areas.

These insights can guide provider-focused strategies such as embedding guideline-based clinical decision support into ordering workflows, reviewing lab panels and care pathways that may inadvertently enable opportunistic screening, and reinforcing evidence-based practices through targeted education and EHR-based decision support.

Equally important is patient-centered communication and patient engagement. Because ovarian cancer is often perceived as a “silent” disease, patients may equate more testing with better care. Clear messaging about when screening is beneficial and when it may cause harm can help align expectations with clinical evidence and reduce demand-driven overuse.

As healthcare systems continue shifting toward value-based care, reducing unnecessary ovarian cancer screening presents a clear opportunity to improve quality, patient safety, and efficiency. When data-driven

insights guide decision-making, healthcare systems can shift from reactive management of waste to proactive design of higher-value care, ensuring that every test, treatment, and intervention truly serves the best interests of patients. Ultimately, the goal is not to limit care but to ensure that preventive services deliver genuine benefit, protecting patients from avoidable harm while directing resources toward interventions that truly improve outcomes.

Key Takeaways for Healthcare Leaders

- **Leverage claims analytics** to identify patterns of low-value ovarian cancer screening across specialties and care settings.
- **Monitor utilization trends** to detect potential overuse and prioritize targeted interventions.
- **Integrate guideline-based clinical decision support into ordering workflows** to discourage routine screening in average-risk, asymptomatic patients.
- **Review standardized lab panels and care pathways** that may inadvertently enable opportunistic screening.
- **Strengthen provider education** on current evidence and guideline-aligned screening practices.
- **Promote clear patient communication** to address misconceptions about screening and align expectations with evidence-based care.

References

¹ American Cancer Society. Ovarian Cancer Early Detection, Diagnosis, and Staging. 2025. Accessed February 20, 2026. <https://www.cancer.org/cancer/types/ovarian-cancer/key-statistics.html>

² National Cancer Institute. Surveillance, Epidemiology, and End Results (SEER) Program. Accessed February 20, 2026. <https://seer.cancer.gov/>

³ Feeney L, Harley IJ, McCluggage WG, Mullan PB, Beirne JP. Liquid biopsy in ovarian cancer: Catching the silent killer before it strikes. *World J Clin Oncol*. 2020;11(11):868-889. doi:10.5306/wjco.v11.i11.868

⁴ US Preventive Services Task Force. Screening for ovarian cancer: US Preventive Services Task Force recommendation statement. *JAMA*. 2018;319(6):588-594. doi:10.1001/jama.2017.21926

⁵ American College of Obstetricians and Gynecologists. The role of the obstetrician–gynecologist in the early detection of epithelial ovarian cancer in women at average risk. *Obstet Gynecol*. 2017;130(3):e146-e149. doi:10.1097/AOG.0000000000002299

⁶ Temkin SM, Miller EA, Samimi G, Berg CD, Pinsky P, Minasian L. Outcomes from ovarian cancer screening in the PLCO trial: Histologic heterogeneity impacts detection, overdiagnosis and survival. *Gynecol Oncol*. 2017;147(2):356-361. doi: [10.1016/j.jejca.2017.10.015](https://doi.org/10.1016/j.jejca.2017.10.015)