timeline where many feel there will be the most benefit and chance for improved survival. It is important to note in this particular study that patients with HRD without a BRCA mutation also benefited from treatment with maintenance niraparib. It is estimated that only 18% of ovarian cancer patients will harbor a BRCA mutation, and the observation that patients without BRCA mutations but with HRD will also respond indicates that more patients will benefit from treatment. Taken together, these findings will dramatically change our treatment of ovarian cancer. We are hopeful that there will also be an improvement in survival and await these results.—LVL)

Quality of Care and Outcomes of Patients With Gynecologic Malignancies Treated at Safety-Net Hospitals

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ABSTRACT

There are well-documented impacts of socioeconomic factors such as race and insurance status on outcomes for women with gynecologic malignancies; however, the role of hospital characteristics in modulating outcomes is less understood. Safety-net hospitals (SNHs), defined by the relative number of uninsured or Medicaid patients, play a critical role by serving the most vulnerable patients and improving access to care for many Americans. Quantitative data show that SNHs tend to have inferior clinical outcomes compared with non-SNHs, although the causes of this disparity are not well understood.

This large multicenter study aimed to examine the quality of care, readmission rates, and survival of women with uterine, ovarian, or cervical cancer treated at SNHs compared with those treated at non-SNH. Women diagnosed with invasive uterine, ovarian, or cervical cancer from 2004 to 2015 were identified using the National Cancer Database, and the hospitals at which they received care were analyzed based on payer mix. Hospitals were stratified into quartiles based on percentages of patients paying with Medicaid, with the highest quartile designated as SNH. Hospitals were analyzed based on quality metrics derived from evidence-based recommendations for various gynecologic cancer presentations and stages. Rates of adherence to each quality metric were compared across hospital quartiles.

Data on a total of 594,750 women from 1340 hospitals were included in this analysis. Hospitals classified as SNHs ranged from 15.8% to 93.1% uninsured or Medicaid patients with a mean of 20.7%, whereas hospitals in the lowest quartile ranged from 0% to 6.6% with a mean of 4.4%. Women treated at an SNH were younger (11.4% vs 6.7% aged <40 years), more frequently identified as black (16.1% vs 6.8%) or Hispanic (13.6% vs 3.6%), and more frequently lived in metropolitan zip codes with lower income and educational attainment (P < 0.0001). Women treated at an SNH presented initially with more advanced-stage disease (P < 0.0001). Women treated with uterine cancer and treated at an SNH were more likely to receive chemotherapy (74.5% vs 73.3%, P < 0.05) but less likely to receive minimally invasive surgery (62.3% vs 75.9%, P < 0.0001) for advanced-stage disease. Women diagnosed with early- and advanced-stage ovarian cancer and treated at an SNH were more likely to receive chemotherapy than at the lowest quartile hospitals (72.0% vs 68.6% and 84.0% vs 81.8%, respectively), but less likely to receive debulking surgery (83.6% vs 86.9% (P < 0.05). Women diagnosed with cervical cancer and treated at an SNH were less likely to receive radical hysterectomy (56.6% vs 56.1%) and concurrent chemoradiotherapy (59.6% vs 65.3%) (P < 0.05). Hospitals designated SNHs had lower rates of lymph node assessment for all 3
cancer types ($P < 0.05$). No statistically significant differences were found in 30-day readmission or perioperative mortality rate following surgery. Mortality among subjects was significantly worse for patients with stage IV ovarian cancer and stages II and III cervical cancer ($P < 0.05$).

The results of this trial show that women with gynecologic cancers treated at SNHs receive lower-quality surgical care, equivalent and often higher rates of adjuvant chemotherapy, and a subset, most notably those with stage II–III cervical cancer, experience a modest decrease in mortality.

**EDITORIAL COMMENT**

(The Institute of Medicine defines safety net providers as “providers that organize and deliver a significant level of both health care and other health-related services to the uninsured, Medicaid, and other vulnerable populations.” They are the “…default system of care.” These providers “offer access to care regardless of a patient’s ability to pay.” Safety net hospitals (SNHs) include almost all public hospitals, numerous academic medical centers, and many private hospitals that are located in low-income urban areas. These hospitals provide significant services such as high-level trauma, neonatal care, and significant ambulatory services. Hospitals are identified based on the volume of care offered to the uninsured and Medicaid patients and receive subsidies from Medicaid and Medicare because of the services provided to these vulnerable populations. The SNHs account for 5% of all hospitals in the United States but provide 17% of uncompensated care and 23% of charity care. There are more than 660 SNHs in the United States currently.

In the current study by Dr Gamble, the quality of care and outcome of patients with gynecologic cancers were evaluated using data from the National Cancer Database, a national cancer registry where data are entered and audited by professional registrars. The study included a large number of patients (almost 600,000) treated at more than 1300 hospitals and found the following: SNHs treated a high percentage of patients with cervical cancer who were more frequently African American; overall, patients presented with advanced disease, had high-risk histology, and patients were less likely to undergo minimally invasive surgery and nodal assessment, were less likely to undergo debulking surgery, were less likely to undergo radical hysterectomy, and were less likely to receive concurrent chemosensitization (standard of care for treatment of cervical cancer). However, no significant difference in survival was found for any cancer except for a moderate decrease in mortality for stage II and III cervical cancer. Patients were offered chemotherapy at similar rates as non-SNH. No difference was seen in 30-day readmissions or risk-adjusted readmissions after accounting for hospital factors. The authors were concerned that not all significant clinical variables could be captured by abstracting data from the National Cancer Database and that their identification of dual-enrolled Medicaid and Medicare patients was not possible, thereby skewing their calculations. There was no way to measure complex social factors influencing care, and lacking surgical procedures may have been located at other nearby high-volume areas and may affect the data presented here indicating that specialty surgery was offered less often to patients. The authors conclude that the “quality of surgical care at SNHs is lower than at non–safety-net facilities” but “despite lower quality in surgical care, survival differences… are modest.”

The SNHs bear the brunt of health care delivery in this country. Studies of SNHs suggest that outcomes are related to the presence of specialists and the ability to offer guideline-consistent care. Outcomes are also related to income (patients without insurance tend to delay seeking care and present with more advanced disease), race, and the presence of a language barrier. Level of care is also related to availability of capital equipment and the presence of quality trained staff.

The health care system continues to be complex and may become more complex as insurance options change. Will SNHs have similar issues if insurance opportunities improve for the population? Regardless, it is important to sort out and understand what services are offered, why they are not offered, and if and when there needs to be a change. In this era where a large number of our population remain uninsured, it is important to support our SNHs and identify important areas that can be improved.—LVL)