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"Demographic and Clinical Insight into the Comorbidities and Mortality of Patients with Vulvar Cancer or Dysplasia in Louisiana"

INTRODUCTION: Studies have shown that vulvar cancer and dysplasia progression is often related to human papillomavirus (HPV) or other conditions. It has been suggested that patients with HPV-related vulvar cancer or dysplasia are likely to have died from a comorbidity rather than from vulvar disease, while patients with vulvar cancer or dysplasia unrelated to HPV often present with more aggressive forms of vulvar disease. The objective of this study was to describe the causes of death in Louisiana patients with vulvar cancer or dysplasia.

METHODS: Retrospective analysis of 53 Louisiana patients diagnosed with vulvar cancer or dysplasia between 2013 and 2022 was performed. Patients were seen at a mix of academic and community hospitals. Patient data was abstracted for demographic and clinical variables including tobacco history, HPV status, comorbidities, and disease status. Categorical distributions across groups were analyzed using Fisher exact tests and two-sample t-tests, and continuous covariates were summarized using a Wilcoxon rank-sum test.

RESULTS: Of the 35 patients with vulvar cancer and 18 patients with vulvar dysplasia, 31 patients (58.5%) were alive without disease, 18 (34.0%) alive with disease, 3 (5.7%) dead of unreported causes, and 1 (1.9%) dead of vulvar cancer. The average age of patients with advanced vulvar cancer (62.4 years) was greater than those with early-stage vulvar cancer (56.2 years) or dysplasia (51.2 years), though this was not significant ($p=.26$). While insignificant, there was a higher rate of HPV in patients with vulvar cancer ($p=1.0$). While patients with early-stage vulvar cancer tended to show higher rates of HPV than patients with late-stage vulvar cancer, this was also not significant ($n=12$ vs. $n=3$, $p=.70$). The average Charlson Comorbidity Index (CCI) score of vulvar cancer patients was significantly greater than patients with vulvar dysplasia (4.89 vs. 2.44, $p<.05$); additionally, average CCI score was significantly greater for patients with late-stage vulvar cancer than for patients with early-stage vulvar cancer (7.78 vs 4.06, $p=.01$). Of the studied comorbidities, pulmonary disease such as COPD or asthma was most strongly associated with vulvar cancer ($p=.04$).

CONCLUSIONS: Our study was limited by size, but in our vulvar cancer and dysplasia population, a majority died from conditions other than vulvar cancer. Those with advanced vulvar disease were significantly older, comorbid, and more likely to have pulmonary disease. This illustrates the impact of prevention, healthcare access, and optimization opportunities during vulvar cancer treatment and surveillance with gynecologic oncology. The limitation in available data presents us with an opportunity for additional work in the future to identify cause of death in patients with vulvar disease by expanding our sample size to increase the study's power.