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To interview Siqi Hu, please contact Julia Gunther at julia.gunther@aacr.org or 770-403-7690. For a photo of Hu, click [here](#). Visit our [newsroom](#).

Ovarian Cancer Patients Face Increased Risk of Mental Illness

Higher rates of anxiety and depression were associated with higher mortality risk

PHILADELPHIA – Women diagnosed with ovarian cancer were more than three times more likely than the general public to be diagnosed with mental illnesses such as anxiety, depression, and adjustment disorder, according to results presented during Week 1 of the virtual [AACR Annual Meeting 2021](#), held April 10-15.

[Ovarian cancer](#) is the fifth most commonly diagnosed cancer in women. Because it is often diagnosed at an advanced stage, it is difficult to treat, resulting in a five-year relative [survival rate](#) of just 48.6 percent.

While some research has examined the quality of life for ovarian cancer patients and survivors, few studies have examined the mental toll taken by this deadly cancer type in population-based studies, explained the study's lead author, Siqi Hu, a PhD candidate in the Department of Family and Preventive Medicine at the University of Utah and Huntsman Cancer Institute.

"Mental health issues are important for cancer patients as they face major disruptions to their lives and deal with the toxic side effects of cancer treatment," Hu said. "We wanted to examine mental health in ovarian cancer patients, who often face a poor prognosis."

In this study, the researchers used the Utah Cancer Registry to identify 1,689 ovarian cancer patients diagnosed between 1996 and 2012 and matched them with 7,038 women without cancer. They used electronic health records to identify mental health diagnoses, excluding those that occurred before the women were diagnosed with ovarian cancer.

The study showed that compared with the general public, patients with ovarian cancer were more than three times more likely to be diagnosed with a mental illness in the first two years after an ovarian cancer diagnosis.

The risk of depression was 3.11 times higher in the first two years after an ovarian cancer diagnosis and 1.67 times higher two to five years post-diagnosis. The risk of anxiety disorder among ovarian cancer survivors was 3.54 times higher in the first two years after diagnosis and 1.86 times higher two to five years post-diagnosis. The risk of adjustment disorder was more than three times higher in patients with ovarian cancer than in those who did not have ovarian cancer.

The researchers also examined the link between mental health issues and mortality risk and found that ovarian cancer patients who had received a mental health diagnosis were 1.8 times more likely to die than those who did not have a mental health diagnosis.

Hu said that based on previous research, she expected that ovarian cancer patients would have an increased risk of mental health disorders. "However, the risks were far higher and persisted over a longer time period than we expected," she said.

The study suggests that patients with ovarian cancer would benefit from comprehensive mental health services during and after cancer treatment, said Hu.

“Mental health screening among ovarian cancer patients is needed,” Hu said. “It is important to be aware that mental health may change over the course of diagnosis and treatment. Cancer patients may need regular mental health consultations to identify issues such as depression and anxiety. Increased support may contribute to prolonging the lives of ovarian cancer survivors.”

The authors said that future research will examine the role that various aspects of treatment play in patients’ mental health. Hu said ongoing research may help oncologists and patients understand and prepare for the psychological effects of cancer treatment.

Hu noted some limitations to the study. First, since this study utilized electronic medical records data, less severe mental illnesses that did not necessitate medical care may have been underrepresented. Also, she pointed out that the high mortality rate of ovarian cancer patients may have resulted in survival bias.

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Abstract

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Publishing Title: Mental health disorders among ovarian cancer survivors in a population-based cohort

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Abstract Body: Ovarian cancer is the fifth most common female cancer in the United States. Although there have been many studies on self-reported QOL among ovarian cancer patients, there have been very few studies investigating mental disease diagnoses among ovarian cancer survivors with long term follow up. The aim of this study is to examine the incidence of mental illness among ovarian cancer survivors compared to a general population cohort. A secondary aim is to investigate risk factors for mental illnesses among ovarian cancer survivors. Cohorts of 1,689 ovarian cancer patients diagnosed between 1996 and 2012 and 7,038 women without cancer matched by age, birth state and follow up time from the general population were identified. Mental health diagnoses were identified from electronic medical records and statewide healthcare facilities data. Cox proportional hazard models were used to estimate hazard ratios (HRs). Ovarian cancer survivors experienced increased risks of mental illnesses within the first two years after cancer diagnosis (HR=3.48, 95%CI=2.98-4.05) compared to the general population. The risks of depression among ovarian cancer survivors were 3-fold within the first two years of cancer diagnosis (HR=3.11, 95%CI=2.53-3.83), and 1.67-fold at 2-5 years after cancer diagnosis (HR=1.67, 95%CI=1.17-2.38). The risk of anxiety disorder among ovarian cancer survivors was 3.54-fold at 0-2 years (HR= 3.54, 95% CI= 2.87-4.38), and 1.86-fold at 2-5 years (HR= 1.86, 95% CI= 1.14-3.01). Elevated risk for adjustment disorders was observed

among ovarian cancer survivors compared with the general population cohort between 0-2 years (HR= 3.96, 95% CI= 1.00-15.84) and between 2-5 years (HR= 3.96, 95% CI= 1.00-15.84). Cancer treatment and later diagnosis year were associated with increased risk of any mental illness at 0-2 years after cancer diagnosis among ovarian cancer survivors. Distant-stage cancer was an important risk factor compared to early-stage for both mental illness and depression among ovarian cancer survivors in all time periods. Ovarian cancer patients who had a mucinous histology subtype had 47% decreased risk of any mental illness and 67% decreased risk of depression at 0-2 years, compare to those with high-grade serous histology subtype. In addition, a baseline CCI score of 1+ and older age at diagnosis (>60 years old) were important for the increased risk of depression at 0-2 years or >5 year after cancer diagnosis, respectively. Ovarian cancer survivors experienced an 80% increased risk of death with a mental illness diagnosis (HR=1.80, 95% CI=1.48-2.18) and a 94% increased risk of death with a depression diagnosis (HR=1.94, 95% CI=1.56-2.40). Higher risks of mental illnesses were observed among ovarian cancer survivors throughout the follow-up periods of 0-2 years and 2-5 years after cancer diagnosis. Multidisciplinary care is needed to monitor and treat mental illnesses among ovarian cancer survivors.

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