

EP230/#827

ASSOCIATION BETWEEN OVARIAN CANCER AND ASBESTOS EXPOSURE: A META-ANALYSIS

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Introduction Despite the publication of numerous well-designed studies on the association between asbestos exposure and ovarian cancer since the 2012 IARC Monograph on asbestos, no comprehensive meta-analysis has been conducted to date. In the present study, a meta-analysis was performed by integrating studies published both before and after the 2014 Helsinki update on Asbestos.

Methods A systematic review of the literature available on PubMed, EMBASE, and the Cochrane Library in July 2022 was conducted to identify relevant studies. Mesh terms and queries were selected based on the advice of a librarian, and included key concepts such as 'asbestos,' 'crocidolite,' 'serpentine,' 'ovarian cancer,' 'ovarian neoplasms,' and 'ovary tumor.'

Results The present analysis includes 18 studies published between 1982 and 2022, reporting data from 1941 to 2015 and involving more than 74,574 participants from 9 countries. An analysis of 16 studies before and after the 2014 Helsinki update found that the overall summary Standardized Mortality Ratio (SMR) was 1.74 (95% CI, 1.46–2.08; P = 0.0440; 17 records). Among the integrated studies, five cohort studies reported a strong correlation between mortality from ovarian cancer and occupational high-intensity asbestos exposure.

Conclusion/Implications The significance of the current study is that it is the first meta-analysis to incorporate both the Helsinki-included studies and subsequent publications. It revealed a significant increase in SMR for ovarian cancer, even in the studies published after the 2012 IARC Monograph. To enhance future research, it is recommended to investigate women diagnosed with ovarian cancer after 1999 using the SIR method, particularly regarding environmental exposure.

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DOES THE DIAGNOSTIC TIMING OF CANCER-ASSOCIATED THROMBOEMBOLISM INFLUENCE THE SURVIVAL OUTCOME IN OVARIAN CANCER PATIENTS?

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Introduction Efforts were made to explore the influence of diagnostic timing for cancer-associated thromboembolic events on survival of ovarian cancer patients.

Methods We reviewed the medical records of 75 ovarian cancer patients with thromboembolism and evaluated the prognostic factors affecting disease-free survival and overall survival.

Results These 75 patients were classified into two categories by the diagnostic timing of the thromboembolism, during (33 cases) and after (42 cases) initial diagnosis of ovarian cancer groups. The diagnostic timing of thromboembolism was not related to disease-free survival or overall survival of the studied population. Advanced disease stage, clear cell histology, interval debulking surgery, no recurrence/persistence of ovarian

cancer, and patients treated with anticoagulant(s) treatment >3 months were associated with the disease-free survival. Advanced disease stage, clear cell histology, body mass index (BMI) ≥ 24 kg/m² at the diagnosis of ovarian cancer, and no recurrence/persistence of ovarian cancer influenced the overall survival. In the subgroup analysis, compared to the after initial ovarian cancer diagnosis group, patients with stage I/II disease, BMI <24 kg/m² at the diagnosis of ovarian cancer, or primary debulking surgery in the during cancer diagnosis group had longer disease-free survival, and overall survival benefit was observed in cases with stage I/II disease, or primary debulking surgery.

Conclusion/Implications The diagnostic timing of thromboembolism was not related to disease-free or overall survival of ovarian cancer patients, but associated with that of specific patient subgroups.

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DEVELOPING A WHOLE EXOME SEQUENCING-BASED HOMOLOGOUS RECOMBINATION DEFICIENCY TEST OF EPITHELIAL OVARIAN CANCER

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Introduction Some studies revealed a very good correlation in HRD detection between Myriad testing and WGS/WES method for breast cancer. However, the clinical value of WES based HRD analysis was less validated in EOC.

Methods We developed a HRD test by WES-based tissue samples (N=44) of EOC patients. Samples were concordantly examined by Myriad myChoice. The correlation of HRD and clinical outcomes among the three tests were analyzed

Results High correlation of HRD score was observed between Myriad and our WES-based scarHRD test (coefficient 0.82, p<0.001) in the linear regression model. In compared to positive HRD status of Myriad test, the sensitivity, specificity, PPV and NPV was 93.5%, 76.9%, 90.6% and 83.3% respectively in our WES-based scarHRD test. The percentages of EOC patients with positive HRD status of our test/Myriad test were higher in advanced FIGO stage (Early vs Advanced: 0% vs 76.2%; p = 0.018)/(Early vs Advanced: 0% vs 73.8% , p = 0.025), and sensitive platinum-response (Sensitive vs Resistant: 84.6% vs 55.6%, p = 0.033)/(Sensitive vs Resistant: 84.6% vs 50%, p = 0.013). In multivariate Cox regression model, optimal debulking surgery (H.R; 0.39, p=0.017) and positive HRD status of our test (H.R; 0.42, p=0.026) were independent factors for lower risk of disease recurrence. Only optimal debulking surgery (H.R; 0.41, p=0.023) but not positive HRD status of Myriad test (H.R; 0.99, p=0.083) was independent factor for lower risk of disease recurrence.

Conclusion/Implications This test had favorable sensitivity, specificity and PPV/NPV and will provide a new feasible option to determine the HRD status of EOC patients