



2. Risk of Breast, Ovarian and Endometrial Cancers in Women with Rheumatoid Arthritis.

Marius Diaconescu¹, Ann Clarke², William Foulkes¹, James Hansen³, Sasha Bernatsky¹.

¹McGill University, Montreal, QC; ²University of Calgary, Calgary, AB; ³L&M Cancer Center in affiliation with Dana-Farber Community Cancer Care, Waterford, CT, USA.

Previous studies found that breast, ovarian and endometrial cancer risk in women with rheumatoid arthritis (RA) is lower versus the general population, although authors do not always agree. Perhaps the dichotomy in findings is due to the differing age compositions of the populations examined. The objective of this study was to examine the risk of breast, ovarian, and endometrial cancers in RA patients, stratified by age groups, versus the general Quebec population.

Incident RA cases were identified from Quebec physician billing data between January 1, 2002, and December 31, 2008. Patients were included if they had 2 or more physician billing code diagnoses for RA (i.e. ICD 9 code 714) at any time. Cancer cases occurring after the RA diagnosis and up to the end date were identified from hospitalization billing diagnoses. Cancers were classified according to International Classification of Diseases, ICD codes, as follows: breast (ICD-9 174, ICD10 C50); ovary (ICD9 183, ICD10 C56); and body of uterus (endometrial), (ICD9 182, ICD10 C54-55). RA subjects were stratified by age into 5 year groups. We then compared the observed cancer incidence to the cancers expected according to Quebec's age-specific general female population cancer incidence rates between 2002 and 2008. We derived a standardized incidence ratios (SIR) for the malignancies of interest, with the corresponding 95% confidence intervals, CIs.

We assessed 46,859 female incident RA patients followed an average of 3.26 (total 152,523) patient-years. Versus the age-matched Quebec population, we found a lower incidence of breast (incidence 1.46/1000 patients, SIR= 0.62, 95% CI 0.54-0.71), ovarian (incidence 0.19/1000, SIR= 0.64, 95% CI 0.43-0.92) and endometrial cancers (incidence 0.27/1000, SIR= 0.60, 95% CI 0.43-0.82). When stratified by age, for breast cancer, all RA age groups seem to have a decreased risk versus the general population. However, for endometrial and ovarian cancers, in younger age groups the confidence intervals were wide, so we cannot provide definitive conclusions for those demographics.

Overall, RA patients demonstrate lower breast, ovarian, and endometrial cancer rates versus the general population. However, a limitation of our study is the use of administrative records, as the RA and cancer diagnoses were not otherwise clinically confirmed. When stratified by age, for breast cancer, all RA patient age groups had a decreased risk. However, in ovarian and endometrial cancers, we cannot provide definitive conclusions in younger age groups. The lower risk of these cancers in RA should be further studied.