3. *Risk of Lung Cancer in Rheumatoid Arthritis Patients*

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The objective of this study is to perform a literature review to determine whether there is an increased risk of lung cancer in patients with rheumatoid arthritis (RA) compared to the general population.

We concluded a systematic review of the risk of lung cancer in rheumatoid arthritis patients looking only at observational cohort studies from 2000-2015. We included original studies in English and French looking at articles from 2 databases: Medline and Embase.

Combining all the 13 cohort groups' results, there is a total of 3040 RA patients observed with lung cancer in a combined population of 262 942 people in a followed-up of 1426490 person-years. The expected number of lung cancer incidence in the same population is estimated to be 2205, thus yielding a SIR of 1.379 [95% confidence interval, 1.33-1.43]. It shows an increase in risk of lung cancer in all the studies, except for Chang et al's cohort study in Korea where the SIR is negative with a wide confidence interval (0.894; 95% C.I 0.49- 1.45) and Huang et al's study in Taiwan where the SIR point estimate-indicated no change in lung cancer rate with SIR of 1.0, with a wide confidence interval [95% C.I, 0.87-1.14].

Pooling data from the 13 articles, the result shows that there is an increase in the lung cancer risk in rheumatoid arthritis patients compared to the general population. However, it is rather unclear whether the onset of cancer is more related to pathogenesis of RA or it is caused by the treatments administered. Additional studies need to be performed in order to discern the reason behind such increase.