Record Linkage to Conduct an Epidemiologic Study on the Association of Rheumatoid Arthritis and Lymphoma in the Province of Saskatchewan, Canada


At the time that this research was conducted, there was a fair amount of evidence that immunosuppressive therapies for rheumatoid arthritis were associated with an increased risk of certain cancers, such as lymphoma. However, there was little evidence to establish whether the elevation in risk was linked to the medications used to treat rheumatoid arthritis or, at least in part, to the condition itself.

This research was conducted in the early days of using administrative health care data for conducting epidemiologic research, an approach this is frequently applied today. To implement the study, researchers compared medical claims with cancer registry data to identify cases of cancer and the corresponding diagnosis dates; they also reviewed diagnostic codes on medical records to establish the reliability and validity of the classification of patients with rheumatoid arthritis. Use of immunosuppressant drugs was ascertained via pharmacy administrative data.

Although the analysis was hampered by the small numbers cases of cancer and of exposure to immunosuppressive therapies, which limited our ability to adjust for specific therapies, it showed that patients hospitalized for rheumatoid arthritis by a rheumatologist had a substantially higher risk of lymphoma or myeloma than individuals hospitalized with an osteoarthritis diagnosis or individuals hospitalized for nonarthritic conditions.