

MULTIPLE SCLEROSIS

Reduced cancer risk in MS

A study that followed over 20,000 patients with multiple sclerosis (MS) through Swedish medical records for an average of 35 years has concluded that patients with MS have an overall cancer risk that is around 10% lower than matched controls. “We identified notably reduced risk for stomach and pancreatic cancers,” reports lead author Shahram Bahmanyar. However, people with MS did have a 44% higher risk of developing brain tumors and a 27% high risk of developing cancer of the urinary system.

“...patients with MS could make changes to their lifestyle after diagnosis that affect cancer risk...”

A total of 20,276 MS patients diagnosed in Sweden between 1969 and 2005, who were identified through the national Swedish Multiple Sclerosis Register and

the National Inpatient Register, were compared with 203,951 people without MS, whose data was obtained from a Swedish general population register. Researchers then used the National Swedish Cancer Register to identify when a cancer diagnosis was confirmed in any of the MS patients or controls who were included in the follow up.

The findings clarify some of the disputed evidence from previous studies, which generally reported a reduced cancer risk in patients with MS, but which were often contradictory. The study design also sought to shed light on why cancer risk might be decreased by investigating the cancer risk in 23,290 parents of MS patients compared with 252,567 parents of controls. The lack of any difference in cancer risk in the previous generation strongly suggests that genetic factors are not important.

The authors speculate that patients with MS could make changes to their

lifestyle after diagnosis that affect cancer risk, or might benefit from the immunomodulatory treatment given for MS. One observation that could be relevant is that MS patients have a significantly lower body mass compared with the general population. “Body mass index is a risk factor for several cancer types,” points out Bahmanyar.

The authors also note the possibility that the increased systemic antimyelin autoimmune response that occurs in patients with MS could be a factor if they cross-react with specific antigens expressed on the surface of tumor cells. Evidence suggests that this effect occurs in some autoimmune diseases, but, notably, not in rheumatoid arthritis, which tends to increase overall cancer risk slightly.

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Original article Bahmanyar, S. *et al.* Cancer risk among patients with multiple sclerosis and their parents. *Neurology* 72, 1170–1177 (2009).