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HT-6-004 The association between medication for ADHD and cancer

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Objectives: A study on chromosomal abnormalities has raised concerns that medication with methylphenidate (MPH) for ADHD might increase the risk of cancer. We performed a rigorous test of the association between cancer and various drugs used for ADHD.

Methods: Data were linked from five Danish registers containing information on a total of 21,186 patients with ADHD, their drug prescription rates, and associated cancer diagnoses between 1994 and 2010. The cohort included subgroups treated with MPH only, antidepressants only, antipsychotics only, mixed medication, and a control group of un-medicated patients with ADHD. Frequencies of cancer diagnoses in these groups were compared. In addition, hazard risk (HR) ratios for developing cancer, and survival rates in these subgroups, were analyzed.

Results: The mean observation time varied between 1.3 and 10.8 years for the various drugs. Receiving methylphenidate (MPH) was associated with 89 % decrease in the risk of cancer compared to the no medication subgroup and mixed medication (MX) (including MPH as the largest component) was associated with 83 % decrease in the risk of cancer compared to the no medication subgroup. Finally, receiving antidepressants (AD) was associated with an almost threefold increased risk of cancer in comparison to the no medication subgroup. Although receiving antipsychotics (AP) was associated with a twofold risk of cancer, this result was not significant. When excluding the MX subgroup from the analyses, the protective MPH subgroup effect remained significant whereas the AD and AP subgroup effects were not significant anymore. There was no evidence of confounding by indication.

Conclusions: Both MPH and MX were protective of cancer while AD was associated with an almost threefold risk of cancer in comparison to the no medication subgroup.