

When should screening start for men with a family history of prostate cancer?

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A nationwide study in Sweden estimates the elevated risk of advanced or fatal prostate cancer among relatives of men with the disease, providing new data that could help refine guidelines for the age at which screening

should begin. Mahdi Fallah and Elham Kharazmi of the German Cancer Research Center (DKFZ) in Heidelberg, Germany, and colleagues present these new findings in the open-access journal *PLOS Medicine*.

Clinical guidelines for the age to start prostate [cancer](#) screening aim to ensure that the benefits of identifying the disease early outweigh the risks of diagnosing and treating cancer that will not harm the patient. Current guidelines note that men with a family history of prostate cancer have a greater risk and should begin screening early. However, due to lack of sufficient data, the age at which early screening should begin has been unclear.

To address this problem, Fallah and colleagues conducted an analysis of all male residents of Sweden born after 1931, as well as their fathers. Between 1958 to 2015, 88,999 out of a total of 6,343,727 men were diagnosed with [advanced stage](#) (III or IV) prostate cancer, or died from the disease.

The researchers used these data to calculate the age at which men who had a father, brother, or son diagnosed with prostate cancer reached the "screening risk threshold;" i.e., the same level of prostate cancer risk as at the age of 50 years across the entire population. (Many guidelines recommend that screening begin at 50 years.)

The researchers found that men with a family history of prostate cancer reached the screening risk threshold up to 12 years earlier. However, different men reached this threshold at different ages, depending on how many of their first-degree relatives had prostate cancer and the age at which the relatives were diagnosed.

By comparing their calculations with various guidelines, the researchers determined that men with a family history of [prostate cancer](#) reach a high enough risk to start screening anywhere from 2 to 11 years earlier

than currently recommended.

These findings could lead to greater personalization of screening guidelines. Further research could help validate these results in populations of different ethnicity, while also accounting for genetics and lifestyle.

"The one-size-fits-all policy in medicine belongs to the past; more and more risk-adapted approaches are needed instead to optimize use of restricted resources in health care", said Dr. Kharazmi, co-leader of this study. "The aim of our group is to fill this gap (a personalized approach in screening) for various cancers, such as [prostate](#), breast, and colorectal cancer, using long-standing high-quality large-scale register-based data, to provide robust evidence to support [screening](#) guidelines", Mahdi Fallah, professor of Medicine (Epidemiology) in the University of Bergen, Norway, and leader of Risk-Adapted Cancer Prevention Group, DKFZ, Germany.

More information: Xu X, Kharazmi E, Tian Y, Mukama T, Sundquist K, Sundquist J, et al. (2021) Risk of prostate cancer in relatives of prostate cancer patients in Sweden: A nationwide cohort study. *PLoS Med* 18(6): e1003616. doi.org/10.1371/journal.pmed.1003616

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