

AACR pubs first set of screening recs from childhood cancer predisposition workshop

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The American Association for Cancer Research (AACR) has published its first set of consensus screening recommendations for children with common cancer predisposition syndromes in *Clinical Cancer Research*, a journal of the AACR. These recommendations emerged from the Childhood Cancer Predisposition Workshop held by the AACR Pediatric Cancer Working Group in October 2016.

These recommendations serve to highlight the genetic nuances associated with childhood [cancer predisposition](#) syndromes as well as provide primary and specialty pediatric clinicians with standardized approaches to facilitate appropriate [surveillance](#) of children affected by such syndromes.

"We are at an evolving time, and in the current era with widespread use of genomic sequencing, several studies indicate that at least 10 percent of childhood cancers arise as a result of [genetic predisposition](#)," said chairperson of the Childhood Cancer Predisposition Workshop, Garrett M. Brodeur, MD.

Brodeur, a professor of pediatrics; Audrey E. Evans Chair in Molecular Oncology; associate director of Abramson Cancer Center; and director of the Cancer Predisposition Program at the Children's Hospital of Philadelphia, added, "Given that in children, the overall risk for developing cancer is low, surveillance in the general population is probably not feasible or economically warranted. However, surveillance seems a sound strategy if target populations with an increased risk for

developing cancer can be identified."

The Pediatric Cancer Working Group of the AACR convened a workshop that included 65 professionals from 11 countries, including 51 physician directors or co-directors of cancer [predisposition](#) programs (pediatric oncologists or medical geneticists), seven genetic counselors, three radiologists, three directors of adult cancer predisposition programs, and a pediatric endocrinologist.

The panel reviewed existing data and practices, and established international consensus recommendations for cancer surveillance for the 50 most common syndromes that predispose children to the development of cancer. These syndromes were then clustered into nine major groups based on the major cancer types with which they are associated: Li-Fraumeni [syndrome](#), neurofibromatoses, overgrowth syndromes and Wilms tumor, neural tumors, GI cancer predisposition, neuroendocrine syndromes, leukemia predisposition, DNA instability syndromes, and miscellaneous syndromes.

"The consensus was that a less than 1 percent prevalence of a particular type of cancer in those 20 years of age or younger is too low and, therefore, not worthy of surveillance, and that if the prevalence is 5 percent or more, then we really should screen," Brodeur noted.

"Surveillance for cancers with prevalence between 1 and 5 percent would depend on specific factors and be considered on an individual basis."

A major outcome of this workshop is the development of 18 position papers that provide recommendations for surveillance, focusing on when to initiate and/or discontinue specific screening measures, which modalities to use, and how frequent to screen patients.

"We needed to start somewhere for a number of these diseases for which

there were no existing protocols. We now have the recommendations for the 50 most common syndromes that predispose children to the development of [cancer](#) in their first 20 years of life. The publications will be made freely available online so that anyone in the world—patients, doctors, anybody interested—will be able to read and download them," Brodeur said. "After we gather some experience in following these surveillance protocols, we hope to meet again and combine our experiences to see how they are working and if they should be modified," he added.

An overview of the initiative and the first five position papers, published on June 1, 2017, are freely available to readers online:

- [Pediatric Cancer Predisposition and Surveillance: An Overview, and a Tribute to Alfred G. Knudson Jr.](#)
- [Pediatric Cancer Predisposition Imaging: Focus on Whole-Body MRI](#)
- [Recommendations for Surveillance for Children with Leukemia-Predisposing Conditions](#)
- [Recommendations for Childhood Cancer Screening and Surveillance in DNA Repair Disorders](#)
- [Clinical Management and Tumor Surveillance Recommendations of Inherited Mismatch Repair Deficiency in Childhood](#)
- [Cancer Screening Recommendations for Individuals with Li-Fraumeni Syndrome](#)

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