Adolescent and Young Adults With Cancer

Adolescent and young adult (AYA) cancer is generally defined as cancer in people 15 to 39 years old. The needs, expectations, and treatment considerations of AYAs merit special consideration.

Genetic Testing in AYAs With Cancer
Cancer may develop from many different causes. It may be hereditary, caused by genetic variants passed from parent to child. It may be sporadic, meaning it develops due to unknown or lifestyle factors, such as tobacco or UV radiation exposure, that may cause variants predisposing to cancer. Finally, cancer may develop by a combination of genetic and lifestyle factors.

AYAs with cancer are more likely than older patients to harbor a genetic vulnerability for cancer, called a germline variant, which is inherited and present in all cells of the body. They are also more likely to have a somatic (acquired) “driver variant” that can develop at random but may be unrelated to toxic exposures. It is important for all AYAs to see a genetic counselor and undergo genetic testing soon after a cancer diagnosis. Finding a germline variant can help identify other family members at increased risk of cancer who can potentially benefit from additional screening. Identifying somatic variants can be critical for an oncologist to select the optimal treatment, often a targeted therapy against that specific variant.

Fertility Concerns in AYAs With Cancer
Cancer treatment can lead to permanent damage to egg and sperm development, so AYA patients with cancer can follow steps to maximize fertility preservation. Men may undergo sperm banking, while women have several options to preserve embryos, eggs, or ovarian tissue. In some cases, monthly hormonal injections during cancer treatment may help maintain fertility. These methods should be discussed with the treating oncologist and a fertility specialist.

Short- and Long-term Adverse Effects in AYAs With Cancer
In addition to the known toxic effects of cancer treatment, such as fatigue, nausea, and hair loss, AYAs are more likely than older patients to experience “chemo brain,” a mental “fogginess.” Young women may enter early menopause. Possible late cardiovascular and neurological adverse effects, as well as potential development of new cancers as a late adverse effect of prior treatment, should be evaluated in the decades after treatment of cancer. It is critical for AYA patients and their physicians to carefully balance the desire for the best treatment of a cancer with an effort to minimize overtreatment that could cause new problems in the future.

Unique Psychosocial Challenges of AYAs With Cancer
AYAs with cancer are prone to psychological distress and face many complications of their diagnosis and treatment. They may have competing responsibilities related to caring for children, relationships, education, and emerging careers. They may struggle with concerns of self-identity and mortality. AYAs and their families should be offered psychological support, sexual counseling, spiritual mentoring, and financial guidance. Patient groups and social media platforms can help AYAs find a safe place for support and solace, health information, and a means of self-empowerment.

FOR MORE INFORMATION
National Cancer Institute
www.cancer.gov/types/aya

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