Whole-Body MRI Screening in Li-Fraumeni Syndrome

In Li-Fraumeni syndrome, a germline TP53 mutation predisposes carriers to multiple types of cancers. An effective way to screen them for early-stage cancers is needed. Ballinger et al performed a meta-analysis of 578 screening participants showing that whole-body magnetic resonance imaging (MRI) for screening patients with Li-Fraumeni syndrome is feasible. Of 42 cancers identified, 35 were treated with curative intent. Long-term studies will need to determine whether whole-body MRI screening increases patient lifespan, but early results seem promising. Asdahl et al provide an Invited Commentary.

Mutations Predisposing to Breast Cancer in Ashkenazi Jews

In high-risk populations, such as women of Ashkenazi Jewish ancestry, the incidence of well-known mutations in BRCA1 and BRCA2 is established. However, the risk of other breast cancer–associated mutations is unknown. Walsh et al sequenced genomic DNA from 1007 Ashkenazi Jewish women from the New York Breast Cancer Study with a multiplexed gene panel. Most had no BRCA1 or BRCA2 founder mutations, but some carried another pathogenic mutation in BRCA1 or BRCA2 or a pathogenic mutation in another gene. Overall, 14.1% carried a germline mutation responsible for their cancer. This suggests that women of this ancestry would benefit from expanded genetic testing.

Luminal and Basal Subtyping of Prostate Cancer

Luminal and basal genetic features, first described in breast cancer, have been applied to bladder and prostate cancer. Zhao et al aimed to identify prostate cancer subtypes based on luminal and basal lineage and associate them with clinical outcomes and treatment response. They subtyped 3782 prostate cancer samples with the PAM50 classifier. Luminal B prostate cancers exhibited worse clinical prognoses than luminal A and basal subtypes. Only luminal B subtype was associated with postoperative response to androgen deprivation therapy. Further study will determine whether these subtypes should be used in prostate cancer classification and prognosis. Abida and Scher provide an Invited Commentary.

Global Burden of Primary Liver Cancer From 1990 to 2015

Liver cancer, a leading cause of cancer deaths globally, is often caused by hepatitis B and C virus infection and alcohol use. The Global Burden of Disease Liver Cancer Collaboration reveals recent liver cancer trends. Cases of incident liver cancer increased by 75% between 1990 and 2015, mostly due to population growth and aging. Hepatitis B and C virus infection and alcohol use accounted for 84% of liver cancer deaths. These data indicate that most liver cancers can be prevented through vaccination, antiviral treatment, safe blood transfusion and injection practices, and interventions to reduce excessive alcohol use.

Clinical Review & Education

Using the National Cancer Database for Outcomes Research

The National Cancer Database (NCDB) is one of the largest cancer registries in the world and has rapidly become one of the most commonly used data resources to study US cancer care. Unlike the Surveillance, Epidemiology, and End Results database, NCDB data are hospital based. To take full advantage of the breadth and depth of captured data, investigators and their audiences must recognize both the strengths and limitations of this data set. Boffa and colleagues examine the pros and cons of the NCDB in this review.

© 2017 American Medical Association. All rights reserved.