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MCC Calendar of Events

In Australia, Cervical Cancer Could Soon Be Eliminated

By Livia Albeck- Ripka, October 2018

Cervical cancer could be eliminated in Australia within the next two decades because of a government program to vaccinate children against the cancer-causing human papillomavirus, according to a new report.

The study, published this week in The Lancet Public Health, found that by 2028, fewer than four women in every 100,000 could be diagnosed with cervical cancer annually in Australia — effectively eliminating the disease as a public health problem. And by 2066, the researchers say, less than one woman per year could receive that diagnosis.

"Australia is on track to become the first country to eliminate cervical cancer," said Karen Canfell, a cancer epidemiologist and the director of Cancer Research at Cancer Council NSW, the organization which led the study. "I think this shows the way forward for other countries."

Australia's national health care system first introduced the vaccination program in 2007 as a cost-free three-dose course for teenage girls. In 2013, the program was expanded to school-age boys, who can carry and transmit the virus, and develop other forms of cancer. According to the Cancer Council Australia, the vaccination has led to a 77 percent reduction in the types of HPV most responsible for cervical cancer. Australia now has one of the lowest cervical cancer incidence and mortality rates in the world.

Researchers attributed the rapid decline in HPV to a combination of efficient government action — which saw the vaccination program implemented in schools nationwide — alongside screening programs for older women and widespread public support.

For the full article, visit The New York Times Website.

Study: Triple Negative Breast Cancer Risk Genes Identified by Panel Testing

Submitted by the Michigan Cancer Genetics Alliance

Triple negative breast cancer (TNBC) is thought to account for approximately 15% of all breast cancers. TNBC does not express estrogen or progesterone receptors, nor does it have overexpression of Her2Neu. Patients with TNBC may have a worse prognosis compared to other breast cancer sub-types, as individuals with TNBC may relapse earlier after standard chemotherapy treatments and often develop visceral metastases (Diana et al 2018).

TNBC has a higher incidence in African American women, and it can be associated with inherited susceptibility. The National Comprehensive Cancer Network (NCCN) recommends BRCA1/2 genetic testing for all TNBC patients diagnosed at age 60 or younger, regardless of family history of cancer.

Recently, Shimelis et al. (2018) identified TNBC risk genes through multigene hereditary cancer panel testing. This study evaluated 10,901 TNBC patients (8753 patients in a clinical cohort, and 2148 patients from the TNBC Consortium) for germline mutations through Ambry Genetic Laboratories in Aliso Viejo, California. Germline genetic testing was performed for 21 genes in the clinic cohort and 17 genes in the TNBC Consortium. Majority of samples from the clinical cohort (62.8%) and from the TNBC Consortium (97.5%) were Caucasian. The clinical cohort sample was 14.5% African American.

As expected, BRCA1 and BRCA2 were associated with a high risk of TNBC in both the clinic cohort and in the TNBC Consortium samples. Other genes associated with an increased risk for developing triple negative breast cancer were PALB2, RAD51D, BRIP1, RAD51C, and TP53. This finding is very important, because previous studies have shown that the BRIP1 and RAD51C genes should be excluded as having a breast cancer risk. Similar trends were identified in the African American population.

Even among individuals who were diagnosed with TNBC over the age of 60 with no family history of cancer, 5% of patients had a positive variant identified in their blood specimen. The BRCA1 gene accounted for a larger proportion of early onset TNBC, whereas other genes accounted for a larger proportion of later onset TNBC. A positive gene variant was identified in 12.4% of TNBC patients meeting NCCN guidelines and in 4.3% of TNBC patients who did not meet NCCN guidelines.

The authors concluded that multi-gene hereditary cancer panel testing can identify individuals at risk for TNBC due to inherited mutations in BARD1, BRCA1, BRCA2, PALB2, RAD51D, BRIP1, RAD51C, and TP53. These individuals may benefit from increased cancer screening and/or risk reducing surgery. Cancer patients with these mutations may benefit from specific targeted therapeutic strategies.

References:

Diana, A, Franzese, E, Centonze, S, Carlino, F, Corte, C, Ventriglia, J, Petrillo, A, De Vita, F, Alfano, R, Ciardello, F, Orditura, M. Triple-Negative Breast Cancers: Systemic Review of the Literature on Molecular and Clinical Features with a Focus on Treatment with Innovative Drugs. Current Oncology Reports (2018) 20:76

Shimelis, H, LaDuca, H, Hu, C, Ha4rt, S, Na, J, Thomas, A, Akuinhanmi, M, Moore, R, Brauch, H. Cox, A, Eccles, D, Ewart-Toland, A, Fasching, P, Fostira, F, Garber, JU, Godwin, A, Konstantopoulou, I, Nevanlinna, H, Sharma, P, Yannoukakos, D, Yao, S, Feng, B, Tippen-Davis, B, Lilyquist, J, Pesaran, T, Goldgar, D., Polley, E, Dolinsky, J, Couch, F. Triple negative Breast Cancer Risk Genes Identified by Multigene Hereditary Cancer Panel Testing. JNCI (2018) 110 (8); djy106

Making Vaccinations a Priority!

Andrea Becker, BSN, RN & Alyssa Nowak, MPH – Division of Immunization, MDHHS

As fall approaches, flu activity is on the rise. The Advisory Committee on Immunization Practices (ACIP) recommends routine annual flu vaccination to all persons ≥ 6 months of age. Influenza, or flu, is a contagious respiratory condition that can cause mild to severe illness. CDC recommends patients receive an influenza vaccine by the end of October if possible, however it is never too late to be vaccinated.

Persons with medical conditions such as generalized malignancy, chronic heart and lung disease and chronic renal disease are at higher risk for complications from flu. Although flu vaccine immunogenicity may be reduced in immunocompromised patients, it is still expected to provide significant clinical protection. Even during seasons when vaccine effectiveness is reduced, vaccination can offer substantial benefit and reduce the likelihood of severe outcomes, including hospitalization and death. A recent study in the *Clinical Infectious Diseases (CID)* journal in 2017, indicated that flu vaccination reduced deaths, intensive care unit (ICU) admissions, ICU length of stay and overall duration of hospitalization among hospitalized flu patients. The study also found that an unvaccinated hospitalized flu patient was 2 to 5 times more likely to die than someone who had been vaccinated.[1] It is vitally important that immunocompromised individuals and their household members receive the flu vaccine every year.

The United States 2017-18 Influenza Season was a high severity season due to widespread influenza activity for an extended period across all age groups. The severity of this influenza season highlights the importance of public health measures to control and prevent influenza. Annual influenza vaccination remains the most effective way to prevent influenza illness.

Pneumococcal disease is an infection caused by *Streptococcus pneumoniae* bacteria and can cause many complications, including pneumonia, bloodstream infections, meningitis and death. There are currently two pneumococcal vaccines to protect against pneumococcal disease: Pneumococcal Polysaccharide vaccine (PPSV23 or Pneumovax® 23) and Pneumococcal Conjugate vaccine (PCV13 or Prevnar13®). Both vaccines have routine and high-risk recommendations, and some people may be indicated to receive both vaccines. The ACIP pneumococcal vaccine recommendations are based on age, vaccination history, and risk factor(s). The Immunization Action Coalition (IAC) has two handouts to help providers assess patients for needed vaccines: "Pneumococcal Vaccine Recommendations for Children and Adults by Age and/or Risk Factor" and "Recommendations for Pneumococcal Vaccine Use in Children and Teens."

Persons with certain medical conditions such as leukemia, lymphoma, multiple myeloma, and generalized malignancy are at an increased risk for pneumococcal disease and its complications. Most (>95%) pneumococcal deaths in the United States are in adults, yet about 80% of adults with conditions that put them at increased risk and 40% of adults 65 years or older remain unvaccinated, leaving them vulnerable.[2] Vaccination is the safest, most effective way to protect yourself from these diseases.

References:

Arriola et al. (2017). Influenza Vaccination Modified Disease Severity Among Community-dwelling Adults Hospitalized With Influenza. *Clinical Infectious Diseases*, 1289-1297.

CDC. (2018, January 23). *Pneumococcal Disease: Fast Facts*. Retrieved from Centers for Disease Control and Prevention: https://www.cdc.gov/pneumococcal/about/facts.html

Helping Breast Cancer Patients through Innovation

For the first time, an app that uses virtual human technology is making it possible for newly diagnosed breast cancer patients to learn about their cancer and treatment options. This unique patient education tool seeks to improve survival rates and health outcomes for women diagnosed with triple negative breast cancer (TNBC). TNBC represents 10 to 20 percent of all breast cancer diagnoses.

Women with triple negative breast cancer have a 16 percent lower five-year survival rate compared to women with other types of breast cancer. With the new app, called Talk to Someone: Triple Negative Breast Cancer, patients can navigate through questions about breast cancer and treatment and get answers from a virtual TNBC survivor named Linda, who is emotionally responsive and easy to understand.

"CDC sought to design a tool with clear, accurate information delivered in an empathetic, nonjudgmental way that engages women and answer questions that they might be afraid to ask their health care team," said DCPC Director Lisa C. Richardson, MD, MPH. "We want women to understand their options and know that there is life after a diagnosis." Patients lead the conversation by selecting questions to "ask" Linda about TNBC, chemotherapy, life during treatment, and survivorship. The goal is to help patients gain knowledge they need to make the right treatment decision for themselves.

Provider Information/Clinical Services Available

GW Cancer Survivorship E-Learning Series for Primary Care Providers: The online learning series contains a module on survivorship care for prostate cancer patients and clinical follow-up care guidelines for primary care providers. Free continuing education credits are available.

2018 MCC Meetings

Annual Meeting (Lansing):
Wednesday, November 7
For more information: 877-588-6224

MCC Website

Be sure to visit the MCC website to find provider and patient resources