HPV Vaccination for Young Adults

The ACIP also recommended that children and young adults up to the age of 26 years who have not yet received the HPV vaccine should be vaccinated. The ACS agreed and added that providers are encouraged to inform young adults between the ages of 22 and 26 years that HPV vaccination may be less effective in lowering their cancer risk.

Furthermore, the ACIP issued another new recommendation noting that although it is not recommended that adults older than 26 years receive the HPV vaccine, shared decision-making is acceptable for adults aged 27 to 46 years who are considering it. (The HPV vaccine cannot prevent the virus if a person is already infected with it, and that is why public health experts emphasize administering the vaccine to children and younger teens.)

The ACS did not endorse this recommendation. "Most people at this age won't benefit," Dr. Saslow explains. "We looked at the same modeling studies that the ACIP reviewed, and they showed that vaccinating people [at these ages] prevents about half a percent or less of HPV genital warts and cancer. We're talking about maybe preventing another dozen cancers per year out of 35,000."

The ACS partners with numerous state, local, and national organizations to furnish providers and the community with ongoing education about the HPV vaccine. The society also runs the CDC-funded National HPV Vaccination Roundtable, a coalition of more than 70 organizations as well as survivors of the 6 HPV-related cancers. The roundtable's website (https://hpvroundtable.org/) provides a clearinghouse of information about upcoming meetings, outreach campaigns, and educational resources.

"There is still a small but significant percentage of parents concerned about vaccine safety, and HPV seems to be more targeted, so we have safety messages," Dr. Saslow says. "It's one of the most studied vaccines—there have been well over 100 studies involving millions of people."

Unfortunately, just as with cancer screenings, the COVID-19 pandemic significantly set back HPV vaccination rates last year. Although numbers rebounded slightly during the closing months of the year, 1.1 million fewer doses of HPV vaccine had been administered since the start of the pandemic in comparison with doses administered during the previous year.

"If kids come back and get the vaccine, it won't affect their risk of cancer, but if we have lost a whole cohort of kids who don't come back, it will make a difference," Dr. Saslow notes.

Dr. Kohn says that the NCI and its partners are conducting ongoing research on how to increase HPV vaccine uptake both nationally and worldwide because of the HPV vaccine's effectiveness in preventing deaths from cervical, head and neck, and other cancers. Globally, women with the highest lifetime cervical cancer risk are not being vaccinated, and this continues to be a matter of pressing concern.

One example of ongoing research is a study published in the *Journal of the National Cancer Institute*.[2] Lead researcher Aimée R. Kreimer, PhD, senior investigator in the NCI Division of Cancer Epidemiology and Genetics, and her colleagues examined long-term follow-up from the Costa Rica HPV Vaccine Trial to determine whether 1 dose of the HPV vaccine is effective in areas with high disease prevalence. Dr. Kreimer and her colleagues reported that more than a decade after the receipt of a single-dose vaccination against HPV-16 or -18 infection, effectiveness remained high and antibodies remained stable among the trial participants. As a result, the authors concluded that additional doses of the vaccine may not be necessary to provide long-term infection protection.

References

1. Fontham ETH, Wolf AMD, Church TR, et al. Cervical cancer screening for individuals at average risk: 2020 guideline update from the American Cancer Society. *CA Cancer J Clin.* 2020;70:321-346. doi:10.3322/caac.21628
2. Tota JE, Struyf F, Sampson JN, et al. Efficacy of the AS04-adjuvanted HPV16/18 vaccine: pooled analysis of the Costa Rica Vaccine and PATRICIA randomized controlled trials. *J Natl Cancer Inst.* 2020;112:818-828. doi:10.1093/jnci/djz222

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Cancer Centers, Organizations Call for COVID-19 Vaccine for Patients With Cancer, Survivors

Pointing to higher risks for patients with cancer and cancer survivors who contract COVID-19, 130 cancer organizations and institutions urged President Joseph Biden and other leading officials to prioritize vaccines for this population.

In a February letter addressed to President Biden, key members of his administration, public health officials, and state health departments, the coalition emphasized the importance of administering lifesaving COVID-19 vaccines to patients with active cancer as well as cancer survivors. The group, led by the American Association for Cancer Research, included numerous leading cancer centers and patient advocacy organizations. They cited the following recent research in support of their request:

- A December 2020 *JAMA Oncology* article showing that patients with cancer who are diagnosed with COVID-19 are more likely to require hospitalization (47.46%) than persons without cancer who are diagnosed with COVID-19 (24.26%).[1]
- A *Cancer Discovery* review of fatality rates for patients with cancer who developed COVID-19 that indicated that the fatality rate was double that of patients without cancer.[2]
- Several studies showing that certain cancer survivors have a higher probability of infection and COVID-19–related death in comparison with the general population.

The coalition also noted that patients with cancer must undergo frequent in-person visits, which increase their risk of exposure to the virus. Many also have a weakened immune status, which makes them more vulnerable to infection. Furthermore,

fear of virus exposure has caused many Americans to delay regular physician appointments, and this will potentially lead to more late-stage cancer diagnoses with fewer treatment options.

The letter went on to state that because of limited vaccine supplies, broadened eligibility groups could result in patients with cancer and cancer survivors waiting many months for vaccines if they do not receive priority.

References

1. Wang Q, Berger NA, Xu, R. Analyses of risk, racial disparity, and outcomes among US patients with cancer and COVID-19 infection. *JAMA Oncol*. 2020;7:220-227. doi:10.1001/jamaoncol.2020.6178
2. Ribas A, Sengupta R, Locke T, et al. Priority COVID-19 vaccination for patients with cancer while vaccine supply is limited. *Cancer Discov*. Published online December 19, 2020. doi:10.1158/2159-8290.CD-20-1817

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An Open Letter: COVID-19 and Cancer

The opinions expressed herein represent the personal views of Dr. Platanias and Dr. Neel, not those of their organizations or of CancerScope.

Among the many affected by the devastating impact of the COVID-19 pandemic in our society, patients with cancer have paid a very high toll. Increasing evidence suggests that COVID-19 causes higher morbidity and mortality among some types of patients with cancer, especially those receiving intensely immunosuppressive treatments. Prevention, early detection, and early intervention efforts have been delayed for many. In some hospitals, significant treatment delays have resulted as COVID-19 cases have overwhelmed patient wards and intensive care units. Consequently, patients who have cancer have presented with more advanced disease, which is more difficult to treat, much less to cure.

A year after the first case of COVID-19 was reported in the United States, we finally have effective vaccines available, and this raises hopes that the pandemic can eventually be controlled. Unfortunately, vaccine distribution at the state level has been relatively slow and most states have not prioritized the distribution of currently available vaccines for patients with cancer. We strongly recommend that this policy be changed. The Biden administration and the new leadership of the CDC have shown a refreshing respect for science and are developing strong initiatives to control the pandemic. We believe that consideration should be given at the national level to prioritizing patients with cancer, or at least those who appear to be at particularly increased risk, for vaccine distribution and administration. A cancer diagnosis and cancer therapy are always stressful, but dealing with cancer during a pandemic is extraordinarily difficult. Prioritizing vaccine administration to these patients is simply the right thing to do.

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Lower Cervical Cancer Risk Associated With HPV Vaccine

A Swedish study that over the course of 11 years followed 1.7 million women between the ages of 10 and 30 years showed that those who were vaccinated against HPV had a significantly lower risk of developing cervical cancer. The research was published last year in *The New England Journal of Medicine*.[1]

This is the first time that researchers have demonstrated at a population level that HPV vaccination is protective against cellular changes that can lead to cervical cancer and against invasive disease according to Jiayao Lei, a PhD student and researcher in the Department of Medical Epidemiology and Biostatistics at Karolinska Institutet in Solna, Sweden.

This is mostly because the HPV vaccine is still relatively new, and invasive cervical cancer takes time to develop, usually not appearing until women are in their 30s or 40s, according to Elise C. Kohn, MD, National Cancer Institute senior investigator and head of Gynecologic Cancer Therapeutics.

In this study, more than 500,000 women were vaccinated with the quadrivalent HPV vaccine from 2006 to 2017. The majority of them received the vaccine before the age of 17 years. In the vaccinated group, 19 women were diagnosed with cervical cancer, whereas 538 women were diagnosed with the disease in the unvaccinated group. The cumulative incidence of cervical cancer was 47 and 94 women per 100,000, respectively.

Girls who were vaccinated before the age of 17 years had an 88% cervical cancer risk reduction, and women vaccinated between the ages of 17 and 30 years experienced half the risk for cervical cancer in comparison with those who were not vaccinated against HPV, the study found.

Study coauthor Pär Sparén, PhD, a professor in the Department of Medical Epidemiology and Biostatistics at Karolinska Institutet, says the reason that girls who were vaccinated at a younger age seemed to be better protected from cervical cancer is that they were less likely to have been exposed to HPV infection before vaccination.

Reference

1. Lei J, Ploner A, Elfström M, et al. HPV vaccination and the risk of invasive cervical cancer. *N Engl J Med*. 2020;383:1340-1348. doi:10.1056/NEJMoa1917338

DOI: 10.1002/cncr.33577