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## Information on Third mRNA COVID-19 Vaccine Dose Added to NCCN Guidance for People With Cancer

NCCN announced significant updates to the NCCN: Cancer and COVID-19 Vaccination guidance. This is the fourth version of NCCN's COVID-19 vaccination guide and incorporates the latest data plus recent approvals from the FDA and CDC regarding a third mRNA vaccine dose for immunocompromised people. The updated guidance is available for free at [NCCN.org/covid-19](https://www.nccn.org/covid-19).

The NCCN COVID-19 Vaccination Advisory Committee comprises multidisciplinary physicians from across NCCN's Member Institutions, with particular expertise in infectious diseases, vaccine development and delivery, cancer management, and medical ethics. The recommendations have been used by cancer care providers around the world to make management decisions during the COVID-19 pandemic based on all available evidence plus expert consensus.

"COVID-19 can be very dangerous, especially for people living with cancer, which is why we're so grateful for safe and effective vaccines that are saving lives," said Robert W. Carlson, MD, Chief Executive Officer, NCCN. "Our organization exists to improve the lives of people with cancer; we have a long track record for making recommendations that improve quality and length of life. We want our patients to live the longest and best lives possible, which means following the science on vaccination and mask-wearing."

According to the NCCN recommendations, the following groups should be considered eligible for a third dose of the mRNA COVID-19 vaccine right away based on the latest FDA/CDC decisions:

- Patients with solid tumors (either new or recurring) receiving treatment within 1 year of their initial vaccine dose, regardless of their type of cancer therapy
- Patients with active hematologic malignancies regardless of whether they are currently receiving cancer therapy
- Anyone who received a stem cell transplant (SCT) or engineered cellular therapy (eg, CAR T cells), especially within the past 2 years
- Any recipients of allogeneic SCT on immunosuppressive therapy or with a history of graft-versus-host disease (GvHD) regardless of the time of transplant
- Anyone with an additional immunosuppressive condition (eg, HIV) or being treated with immunosuppressive agents unrelated to their cancer therapy

The update highlights timing recommendations from the CDC that people wait at least 4 weeks between second and third doses. Patients who develop COVID-19 despite initial vaccination should wait until they have documented clearance of the virus before their third dose.

People living in the same household with immunocompromised individuals should also get a third dose once it is available to them, according to the panel. The committee also points out that it's best to get the same type of vaccine as the first 2 doses, but a different mRNA vaccine is also acceptable. The guidance includes a preference for immunocompromised individuals to try to receive their third dose in a healthcare delivery setting, rather than a pharmacy or public vaccination clinic whenever possible, in order to limit their risk of exposure to the general population.

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“When it comes to people’s safety, we have to take every precaution,” said Steve Pergam, MD, MPH, Associate Professor, Vaccine and Infectious Disease Division, Fred Hutchinson Cancer Research Center and Infection Prevention Director at Seattle Cancer Care Alliance, Co-Leader of the NCCN COVID-19 Vaccination Advisory Committee. “That means even after a third dose of vaccine, we still recommend immunocompromised people—such as those undergoing cancer treatment—continue to be cautious, wear masks, and avoid large group gatherings, particularly around those who are unvaccinated. All of us should do our part to reduce the spread of COVID-19 and get vaccinated to protect those around us from preventable suffering.”

The recommendations from the NCCN COVID-19 Vaccination Advisory Committee are intended for clinicians and other health system workers. NCCN also publishes a nonmedical version intended for patients and caregivers; that guidance has been updated to also include information about the third dose.

Visit [NCCN.org/covid-19](https://www.nccn.org/covid-19) for both versions of the vaccination recommendations, plus a statement supporting COVID-19 vaccine mandates for the healthcare workforce, and other free resources on cancer care during the pandemic.

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## NCCN Supports Mandatory COVID-19 Vaccination for Health Workers

NCCN joins the growing call for mandatory COVID-19 vaccination for all eligible healthcare workers. The organization issued an official statement at [NCCN.org/covid-19](https://www.nccn.org/covid-19) calling on all healthcare systems to ensure their workforces are immunized, which includes the following perspective:

“Patients with cancer are more susceptible to COVID-19 complications and may not mount effective immune responses to vaccination, so it is incumbent on healthcare workers to be immunized against COVID-19. In so doing, we help to create a cocoon effect in which vulnerable individuals are protected from COVID-19 by vaccinating those who care for these patients.”

“Cancer care providers have a responsibility to their patients and colleagues to do everything they can to reduce the spread of COVID-19; that includes getting vaccinated,” said Robert W. Carlson, MD, Chief Executive Officer, NCCN. “We know cancer patients already face a higher risk from COVID-19 and must be protected during their many interactions with healthcare workers. According to the science, vaccines are our best option to safely protect ourselves and the people around us from this potentially deadly disease.”

NCCN’s endorsement of mandatory vaccination for healthcare workers stems from the work of the NCCN COVID-19 Vaccination Advisory Committee, a group of leading physicians with expertise in infectious diseases, vaccine development and delivery, cancer management, and medical ethics. The committee has previously shared evidence-based expert consensus recommendations on vaccinating people with cancer against COVID-19. They regularly update this guidance—which is intended for clinicians and also available in a patient-friendly format.

“We’re deeply committed to doing everything to protect our patients from COVID-19,” said Brahm Segal, MD, Roswell Park Comprehensive Cancer

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Center, Co-Leader of the NCCN COVID-19 Vaccination Advisory Committee. “Our patients come to our centers for high-quality and cutting-edge cancer care. We must insist they are protected as much as possible from COVID-19 during medical visits, and this requires that our workforce be immunized.”

Read the entire statement at [NCCN.org/vaccine-statement](https://www.nccn.org/vaccine-statement) and visit [NCCN.org/covid-19](https://www.nccn.org/covid-19) for additional frequently updated recommendations on cancer care during the pandemic.

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## NCCN Policy Summit Explores the Promise and Challenges of New Technologies in Cancer Care

NCCN convened an NCCN Policy Summit on The Impact of Technology on Cancer Care in 2021. The online program brought together experts and innovators who are using emerging technologies to improve the quality, efficiency, and accessibility of cancer care on both a national and local level.

“We recognize that there are tremendous opportunities in leveraging technology to close gaps in our healthcare system in order to provide better care, reduce physician burnout, and control costs for people with cancer,” said Robert W. Carlson, MD, Chief Executive Officer, NCCN. “At the same time, we have to worry about unintentionally exacerbating existing problems and creating new areas of bias and inequity. We convened this summit to share diverse perspectives on both policy and practice for what can be done with technology, and more importantly, what should be done.”

“The NCI Cancer Imaging Program (CIP) supports innovative research for discovery, technology development, and clinical translation of new imaging methods for people with cancer,” said keynote speaker Janet Eary, MD, Associate Director, CIP. “Among many activities, CIP maintains a large imaging data archive as a public research resource, which promotes new imaging and data analyses that can be used to address issues in care delivery equity. The archive image datasets with their clinical metadata are collected from different populations so that researchers can apply innovative imaging research and data analysis approaches to these reference examples.”

Dr. Eary also reported that “imaging research continues to develop innovative approaches that can be harnessed to address the needs of individuals and different populations of people with cancer.”

Panelists examined some of the areas where technology holds the most potential for improving care, while also looking at areas of concern.

“Digital tools and technology are integrating into our daily lives,” said Edmondo Robinson, MD, MBA, Senior Vice President, Chief Digital Officer, Moffitt Cancer Center. “Health policy is increasingly recognizing these opportunities, from telehealth to artificial intelligence and beyond; this has been accelerated by the COVID-19 pandemic. In oncology, there is much more we can do to truly harness the power and potential of digital tools to prevent and cure cancer.”

Beyond imaging, major topics of interest included:

- Monitoring patient experiences between visits
- Proactively managing symptoms and side effects before hospital admission is needed
- Providing better decision support for clinicians

- Integrating technology into the clinician workflow more seamlessly
- Improving patient engagement and access to information
- Utilizing machine learning to analyze data
- Addressing greater inclusion of underrepresented populations in the clinical dataset and improving awareness of social determinants of health
- Resolving regulatory hurdles and infrastructure disparities

The program also included several presentations highlighting a few recently developed tools intended to improve the cancer journey for patients and caregivers.

"We created the LLS Health Manager mobile app because we recognized the need for a tool that allows patients to track their daily health. Managing side effects is an important part of cancer care, and by tracking medication, side effects, food, and hydration, patients and their doctors can begin to identify patterns and develop strategies to help them do so," said Amanda LaRussa, Director, Patient Education & Web Content, The Leukemia & Lymphoma Society (LLS). "We also created a free coloring app called LLS Coloring for Kids, designed to allow children to express their creativity while learning about blood cancer and its treatments. We felt it was important to offer kids a fun and encouraging platform to help them cope with the emotional challenges that come along with a cancer diagnosis." Both are available to download for free in the App Store or Google Play.

#### Additional quotes from speakers and presenters:

*Laura Chavaree, LCSW, MSW, Head of Patient Engagement, Blue Note Therapeutics said:*

"The inevitable stress that accompanies a cancer diagnosis often leads to anxiety and depression. Unfortunately, cancer care teams have limited resources and time to provide psychosocial care and cancer-related distress can go undertreated or even unrecognized. Blue Note Therapeutics is committed to addressing this unmet need as we leverage clinically validated, digital technology to provide greater access to the full suite of care for cancer-related distress available in top cancer centers. Collaborating closely with patient advisors, we are co-creating these exciting new tools and a future where clinicians are enabled through technology to extend their reach, giving patients the ability to better manage the emotional burden of cancer at home, on their own time."

*James Hamrick, MD, MPH, Vice President, Clinical Oncology, Flatiron Health said:*

"Machine learning-based tools have the potential to improve patient care and safety through more efficient healthcare delivery. At Flatiron Health, we use machine learning to proactively identify patients who are at risk for an adverse clinical event and surface these insights directly in clinical workflows to help care teams better direct resources to patients that need them most. As part of this investment, we built a rigorous model monitoring an analytic solution to mitigate the very real risk of reproducing real-world disparities in machine learning algorithms."

*Kjel Johnson, PharmD, Vice President, Specialty Strategy and Client Solutions, CVS Caremark said:*

"A cancer diagnosis can be overwhelming. What makes it even harder is that the treatment journey is fraught with breakdowns—

from getting patients diagnosed in a timely manner to making sure they get on the most appropriate regimen for their specific diagnosis as quickly as possible. Using technology-enabled solutions can close these gaps and improve the overall quality of care.”

“CVS Health has invested more than \$100 million in its digital infrastructure to help get patients on the right treatments faster, mitigate adverse events and prevent unnecessary admissions, to improve the overall quality and cost of care,” Johnson added.

#### Additional speakers and presenters included:

- Kim Agricola, Director, Digital Content, Cancer Support Community
- Vanessa Cramer, Director of Policy, Ovarian Cancer Research Alliance
- Jonathan Darer, MD, MPH, Chief Medical Officer, Medicalis, Medical Director of Clinical Decision Support, Principal Key Expert for Clinical Pathways and Decision Support, Siemens Healthineers
- Tim Foley, MBA, Vice President, Oncology, Optum
- Tufia Haddad, MD, Chair of Practice Innovation and Platform, Mayo Clinic Cancer Center, Medical Director of Care at Home, Center for Digital Health
- Jocelyn Ulrich, MPH, Deputy Vice President, Medical Innovation Policy, The Pharmaceutical Research and Manufacturers of America (PhRMA)

The next policy summit will be the annual NCCN Patient Advocacy Summit, taking place on Tuesday, December 7, 2021. This year’s NCCN Patient Advocacy Summit will focus on Advancements in Precision Medicine and Implications for Quality, Accessible, and Equitable Cancer Care. To register, visit [NCCN.org/summits](https://www.nccn.org/summits) and join the conversation with the hashtag #NCCNPolicy.

## NCCN Shares Latest Expert Recommendations for Prostate Cancer in Spanish and Portuguese

NCCN announced recently updated versions of evidence- and expert consensus-based guidelines for treating prostate cancer, translated into Spanish and Portuguese. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines) feature frequently updated cancer treatment recommendations from multidisciplinary panels of experts across NCCN Member Institutions. Independent studies have repeatedly found that following these recommendations correlates with better outcomes and longer survival.

“Everyone with prostate cancer should have access to care that is based on current and reliable evidence,” said Robert W. Carlson, MD, Chief Executive Officer, NCCN. “These updated translations—along with all of our other translated and adapted resources—help us to define and advance high-quality, high-value, patient-centered cancer care globally, so patients everywhere can live better lives.”

Prostate cancer is the second most commonly occurring cancer in men, impacting more than a million people worldwide every year.<sup>1</sup> In 2020, the NCCN Guidelines for Prostate Cancer were downloaded more than 200,000 times by people outside of the United States. Approximately 47 percent of registered users for [NCCN.org](https://www.nccn.org) are located outside the United States, with Brazil, Spain, and Mexico among the top 10 countries represented.

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NCCN Guidelines are incredibly helpful resources in the work we do to ensure cancer care across Latin America meets the highest standards.

“NCCN Guidelines are incredibly helpful resources in the work we do to ensure cancer care across Latin America meets the highest standards,” said Diogo Bastos, MD, and Andrey Soares, MD, Chair and Scientific Director of the Genitourinary Group of The Latin American Cooperative Oncology Group (LACOG). The organization has worked with NCCN in the past to develop Latin American editions of the NCCN Guidelines for Breast Cancer, Colon Cancer, Non–Small Cell Lung Cancer, Prostate Cancer, Multiple Myeloma, and Rectal Cancer, and co-hosted a webinar on “Management of Prostate Cancer for Latin America” earlier this year. “We appreciate all of NCCN’s efforts to make sure these gold-standard recommendations are accessible to non-English speakers and applicable for varying circumstances.”

NCCN also publishes NCCN Guidelines for Patients, containing the same treatment information in nonmedical terms, intended for patients and caregivers. The NCCN Guidelines for Patients: Prostate Cancer were found to be among the most trustworthy sources of information online according to a recent international study. These patient guidelines have been divided into 2 books, covering early and advanced prostate cancer; both have been translated into Spanish and Portuguese as well.

NCCN collaborates with organizations across the globe on resources based on the NCCN Guidelines that account for local accessibility, consideration of metabolic differences in populations, and regional regulatory variation. They can be downloaded free-of-charge for noncommercial use at [NCCN.org/global](https://www.nccn.org/global) or via the Virtual Library of NCCN Guidelines App. Learn more and join the conversation with the hashtag #NCCNGlobal.

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## Reference

1. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin* 2021;71:209–249.