COVID-19 Treatment, PEP and PrEP

Some people undergoing cancer treatment do not respond well to COVID-19 vaccines, leaving them at risk for severe illness.

March 14, 2022 By Liz Highleyman

Some people undergoing cancer treatment—especially those with blood cancers—do not respond well to COVID-19 vaccines, leaving them at risk for severe illness. But early treatment and pre- or post-exposure prophylaxis (PEP or PrEP) using antiviral pills or monoclonal antibodies could be game-changing. PEP is intended for people who have recently been in close contact with someone who has the coronavirus, while PrEP is taken before exposure to preemptively prevent infection or illness.

On December 22, the Food and Drug Administration (FDA) granted emergency use authorization of Paxlovid (nirmatrelvir plus ritonavir), the first antiviral pill for COVID-19. Clinical trial participants who received Paxlovid within three days of developing symptoms had an 89% lower risk for hospitalization or death. A day later, the agency authorized a second antiviral, molnupirivair, which reduced the risk by 30% for those treated within five days. Both antivirals are indicated for people who test positive for SARS-CoV-2, have mild to moderate symptoms and are at risk for severe illness. The IV antiviral remdesivir (Veklury) is also used to prevent disease progression.

Monoclonal antibodies are another option, but some approved antibodies are no longer effective against the SARS-CoV-2 omicron variant. The FDA has authorized Evusheld (tixagevimab plus cilgavimab) as PrEP for immunocompromised people, including cancer patients who remain unprotected despite vaccination. A single dose of Evusheld reduces the risk of symptomatic COVID-19 by about 80%, and protection may last six months. Antiviral pills are also being studied for PEP and PrEP for people at high risk for severe disease.