

**COVID-19 Clinical Oncology  
Frequently Asked Questions (FAQs)**  
*Last Updated – March 12, 2020*

ASCO invited its members to submit questions about issues and challenges they see emerging while caring for patients with cancer in the context of the coronavirus pandemic. Currently, limited clinical cancer-specific data are available and information is evolving. The following answers to questions we received are based on evidence gathered through a PubMed search of the medical literature, a search of relevant websites with information on infectious diseases (CDC, WHO, IDSA, etc.), and input provided by clinical oncologists and infectious disease experts. ASCO will update this information as new questions emerge and evidence develops.

Question	Answer
<p><b>1. Are there guidelines about what a practice should do if a patient tests positive for COVID-19? If a patient is seen at an outpatient clinic, should the clinic be quarantined?</b></p>	<p>At this time, there is no published guidance available that would address the specific question of how an outpatient facility should respond if a recently seen patient is found to have COVID-19 infection beyond what is described in the CDC guidance.</p> <p>The CDC has published guidance for infection control and prevention in healthcare settings in the context of COVID-19: <a href="https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control.html">https://www.cdc.gov/coronavirus/2019-ncov/infection-control/control-recommendations.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fhcp%2Finfection-control.html</a> (Updated March 10, 2020. Accessed March 11, 2020)</p> <p>The CDC also published guidance for risk assessment and public health management of health care workers who may have been exposed or who are infected with COVID-19 here: <a href="https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html">https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assesment-hcp.html</a> (Updated March 7, 2020) (Accessed March 11, 2020)</p> <p>ASCO encourages clinicians and oncology practices to follow this guidance where possible.</p> <p>The practice points may be considered to guide clinic preparation and planning: <i>Staff Preparedness:</i></p> <ul style="list-style-type: none"> <li>• Office/clinic staff may need additional training to screen patients for possible COVID-19 infection/other infections.</li> <li>• Procedures to isolate potentially infected patients may need review and updating.</li> <li>• Clinic staff may need additional training on the use of personal protective equipment (PPE).</li> </ul>

	<ul style="list-style-type: none"> <li>• Additional PPE may need to be obtained/sourced, as staff that do not usually use it may be required to perform tasks where it is appropriate.</li> <li>• Clinic staff may need additional training on how to obtain SARS-COV2 testing for patients according to current testing guidelines.</li> </ul> <p><i>Patient scheduling:</i></p> <ul style="list-style-type: none"> <li>• It may be reasonable to postpone routine follow-up visits of patients not on active cancer treatment or to conduct those appointments via telemedicine.</li> <li>• Consider calling all scheduled patients 1-day in advance of clinic visit to screen for COVID-19 exposure/symptoms.</li> <li>• Home collection of routine lab samples may be considered instead of patients coming into the clinic.</li> </ul> <p><i>Treatment planning:</i></p> <ul style="list-style-type: none"> <li>• For patients with fever or other symptoms of infection, a comprehensive evaluation should be performed as per usual medical practice.</li> <li>• For patients with diagnosed COVID-19 on active anti-cancer treatment, follow standard clinical management plans for delay or modification of cancer treatment in a patient with active infection.</li> <li>• Current information suggests that cancer patients have higher risk of infection and serious complications from COVID-19 than other patients. For patients without known COVID-19 infection, in most circumstances it is likely more important to initiate or continue systemic cancer treatment than to delay or interrupt treatment due to concerns about potential COVID-19 infection. However, decisions should be individualized after considering the overall goals of treatment, the patient’s current oncologic status and treatment tolerance as well as their general medical condition.</li> <li>• Consider whether home infusion of chemotherapy drugs is medically and logistically feasible for the patient, medical team and caregivers.</li> </ul> <p>EVIDENCE: No specific evidence was identified in a PubMed search on the question of clinic-wide quarantine in an outpatient setting. An internet search located the CDC guidance, as well as guidance from other national jurisdictions and the World Health Organization (WHO). WHO guidance was considered substantially similar to the CDC’s. All searches conducted on March 11, 2020.</p>
<p><b>2. For patients with hematological malignancies, should oncologists consider less intensive care where possible; for example</b></p>	<p><i>General</i></p> <p>At this time, no specific recommendations can be made (except for stem cell transplantation, see below) for delay in therapy or choosing alternate therapy in the context of COVID-19 infection. Patients scheduled for immunosuppressive therapy and at risk for exposure per local public health guidance should be screened, where possible, for COVID-19 prior to the initiation of therapy in order to guide decision-making.</p>

<ul style="list-style-type: none"> <li>• <b>delaying allogeneic stem cell transplantation</b></li> <li>• <b>using R-CHOP instead of R-EPOCH for double hit lymphomas.</b></li> </ul>	<p><i>Delaying allogeneic stem cell transplantation</i></p> <p>In some cases of patients at high-risk for COVID-19, delaying a planned allogeneic SCT may be reasonable, particularly if the patient’s malignancy is controlled with conventional treatment. Until further data are available, clinicians are encouraged to follow the recommendations provided by the American Society of Transplantation and Cellular Therapy (ASTCT); <a href="https://www.astct.org/connect/astct-response-to-covid-19">https://www.astct.org/connect/astct-response-to-covid-19</a>) and the European Society for Blood and Marrow Transplantation (EBMT) with respect to stem cell transplantation (<a href="https://www.ebmt.org/ebmt/news/coronavirus-disease-covid-19-updated-ebmt-recommendations-8th-march-2020">https://www.ebmt.org/ebmt/news/coronavirus-disease-covid-19-updated-ebmt-recommendations-8th-march-2020</a>).</p> <p>The following practice points may be considered:</p> <ul style="list-style-type: none"> <li>• It may be prudent to test potential donors for COVID-19 even in an absence of evidence on transmission by blood transfusion.</li> <li>• As a general precaution, visitation post-transplant may need to be limited and visitors may need to be screened for symptoms and potential exposure.</li> </ul> <p>EVIDENCE – no specific evidence was identified in search of PubMed on March 11, 2020 using terms related to COVID-19 and hematological malignancies. Internet searches using Google and expert opinion identified the ASTCT and EBMT guidance; no other guidance was identified. ASTCT (updated March 11, 2020) and EBMT guidance (updated March 8, 2020) were last accessed March 11, 2020. Practice points based on expert opinion of clinicians consulted by ASCO March 10-12, 2020.</p>
<p><b>3. Is there any value in providing prophylactic antiviral therapy to a wider population of immune suppressed patients than we routinely do? If so, who (which populations) and what (agent and dose)?</b></p> <p><b>What is the role of Tamiflu or similar agents in patients with or suspected of COVID-19?</b></p>	<p>At this time, there is no evidence or published guidance on the use of prophylactic antiviral therapy for COVID-19 in immune suppressed patients. This is an active area of research and evidence may be available at any time. Prophylactic antiviral therapy directed at other viral infections should be continued according to standard clinical guidelines and institutional practices. Tamiflu is not known to be effective in treatment of COVID-19.</p> <p>EVIDENCE – No specific evidence was identified in searches of PubMed, Google Scholar or internet searches conducted March 11, 2020.</p>
<p><b>4. What guidance is available about holding chemo for patients currently on treatment so that</b></p>	<p>At this time, there is no evidence to support changing or holding chemotherapy or immunotherapy in patients with cancer or in BMT/SCT patients. Withholding critical anti-cancer or immunosuppressive therapy is not currently recommended. Furthermore, BMT/SCT patients may have prolonged immunosuppression</p>

<p><b>their immune systems can reconstitute as they get infected from likely community spread of COVID-19?</b></p>	<p>despite stopping post-transplant chemotherapy. With respect to stem cell transplantation, also see the response to Question 1.</p> <p>The following practice points may be considered:</p> <ul style="list-style-type: none"> <li>• For patients in deep remission who are receiving maintenance therapy, stopping chemotherapy may be an option.</li> <li>• Some patients may be able to switch chemotherapy from IV to oral therapies, which would decrease the frequency of clinic visits.</li> <li>• Decisions on modifying or withholding chemotherapy should include consideration of the indication for chemotherapy and the goals of care as well as where the patient is in the treatment course and their tolerance of treatment. For example, the risk: benefit assessment for proceeding with chemotherapy in patients with untreated extensive small cell lung cancer is different from that for patients on maintenance pemetrexed for metastatic NSCLC.</li> <li>• Patients should be informed regarding the symptoms of COVID-19, and trained in proper handwashing, hygiene, and minimizing exposure to sick contacts and large crowds.</li> <li>• If a local transmission affects a particular cancer center, giving a chemotherapy break for two weeks, arranging infusion at an unaffected satellite unit or arranging treatment with another facility that is not affected, may be reasonable options.</li> </ul> <p>EVIDENCE: No specific evidence was identified in a search of PubMed on March 12, 2020 using terms related to COVID-19 and immunosuppression. No specific guidance was identified in internet search March 11, 2020 on this question. Practice points based on expert opinion of clinicians consulted by ASCO March 10-12, 2020.</p>
<p><b>5. Is guidance available on use of adjuvant chemo in coming weeks, where risk of neutropenia may be a factor in patients becoming very unwell with COVID-19? We consider small absolute benefits, for example, in ER+ breast cancer. Would the risk outweigh this small benefit in coming weeks? How do we counsel patients?</b></p>	<p>At this time, there is no specific evidence or published guidance to support delaying or interrupting adjuvant chemotherapy. However, individuals receiving chemotherapy can be considered as a vulnerable population for serious coronavirus complications. There is limited or no evidence as to what the harms may be from delaying or interrupting adjuvant treatment versus the benefits of potential prevention of COVID-19 infection. Clinical decisions should be individualized considering factors such as the risk of cancer recurrence if adjuvant chemotherapy is delayed, modified or interrupted, the number of cycles of adjuvant chemotherapy already completed and the patient’s tolerance of treatment.</p> <p>The following practice points may be considered:</p> <ul style="list-style-type: none"> <li>• In some settings delays or modifying adjuvant treatment may pose a higher risk of compromised disease control and long-term survival than in others.</li> </ul>

	<ul style="list-style-type: none"> <li>• Prophylactic growth factors as would be used in high-risk chemotherapy regimens as well as prophylactic antibiotics may be of potential value in maintaining the overall health of the patient and make them less vulnerable to potential COVID-19 complications.</li> <li>• In cases where the absolute benefit of adjuvant chemotherapy may be quite small, and where non-immunosuppressive options are available (e.g. hormonal therapy in ER+ early-stage breast cancer), potential exposure to COVID-19 may be considered as an additional factor in weighing the different options available to the patient.</li> </ul> <p>EVIDENCE: No specific evidence identified in PubMed searches conducted March 11, 2020. No specific guidance identified in internet searches. Practice points based on expert opinion of clinicians consulted March 10-12, 2020.</p>
<p><b>6. Do we have data from Italy or China about the risk of COVID-19 infection in temporarily neutropenic patients? Is the risk increased for our patients with solid malignancies that go through periods of 5-10 days of neutropenia between cycles of chemo?</b></p>	<p>At this time, only one published, detailed report comparing COVID-19 course of illness in patients with cancer to those without cancer could be identified (Liang et al, Lancet Oncol, <a href="http://dx.doi.org/10.1016/S1470-2045(20)30096-6">http://dx.doi.org/10.1016/S1470-2045(20)30096-6</a>). This paper reporting on a prospective cohort of 1571 patients with COVID-19, 18 of which had a prior history of cancer, found that patients with a history of cancer had a higher incidence of severe events – defined as the percentage of patients admitted to an intensive care unit requiring invasive ventilation, or death – compared with other patients. It did not establish a definitive increase in incidence of COVID-19 infection. In correspondence related to the report Xia et al (Lancet Oncol, <a href="https://doi.org/10.1016/S1470-2045(20)30150-9">https://doi.org/10.1016/S1470-2045(20)30150-9</a>) state that these 18 patients represent a heterogeneous group and are not an ideal representation of the entire population of patients with cancer.</p> <p>Additional information about patients at increased risk of severe COVID-19, and tips for managing this risk, are available through the CDC: <a href="https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications.html">https://www.cdc.gov/coronavirus/2019-ncov/specific-groups/high-risk-complications.html</a> (Updated March 10, 2020. Accessed March 11, 2020)</p> <p>EVIDENCE: Article identified in PubMed search conducted March 11, 2020. No specific evidence on patients with neutropenia was identified in searches of PubMed, Google Scholar, or other internet searches on March 11, 2020.</p>
<p><b>7. Is it recommended that patients on treatment and neutropenic but who are not hospitalized wear a mask outdoors? Is an N95 necessary?</b></p>	<p>At this time, no specific evidence or guidance on mask use in cancer patients has been published. Patients and clinicians are urged to follow the US CDC’s general recommendations on mask wear, available at <a href="https://www.cdc.gov/coronavirus/2019-ncov/about/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fprevention-treatment.html">https://www.cdc.gov/coronavirus/2019-ncov/about/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fprevention-treatment.html</a>. There is no guidance or evidence to suggest that N95 masks are required.</p>

	<p>EVIDENCE: No specific evidence identified in PubMed searches conducted March 11, 2020. Internet search identified CDC mask wear guidance at: <a href="https://www.cdc.gov/coronavirus/2019-ncov/about/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fprevention-treatment.html">https://www.cdc.gov/coronavirus/2019-ncov/about/prevention.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fabout%2Fprevention-treatment.html</a>. (Updated March 10, 2020. Accessed March 11, 2020).</p>
<p><b>8. What is the best estimate for the incubation time after exposure?</b></p>	<p>According to information from the CDC, the estimated incubation period for COVID-19 ranges from 2-14 days, based on existing literature from other coronaviruses such as MERS-CoV and SARS-CoV.</p> <p>EVIDENCE: <a href="https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html">https://www.cdc.gov/coronavirus/2019-ncov/hcp/faq.html</a> (CDC page last reviewed: March 10, 2020, accessed March 11, 2020)</p>
<p><b>9. Is information available from Italy on how to protect our Day Oncology Units and chemotherapy patients from this unfolding crisis? Looking for practical advice on how intense the screening/ lock-down needs to be in a hospital/unit BEFORE any known cases present. What could work?</b></p>	<p>At this time, there are no published reports that describe the experience in Italy with respect to COVID-19 and cancer. However, the Italian Ministry of Health has published guidance (in Italian) specific to cancer centers on its website: <a href="http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioNotizieNuovoCoronavirus.jsp?lingua=italiano&amp;menu=notizie&amp;p=dalministero&amp;id=4200">http://www.salute.gov.it/portale/nuovocoronavirus/dettaglioNotizieNuovoCoronavirus.jsp?lingua=italiano&amp;menu=notizie&amp;p=dalministero&amp;id=4200</a></p> <p>For general advice regarding healthcare facility protocols, see question 1.</p> <p>EVIDENCE: No specific evidence identified in PubMed searches conducted March 11, 2020. Internet search identified Italian guidance linked above and CDC guidance found in Question 1 response (accessed March 11-12, 2020).</p>
<p><b>10. Is there definitive data showing cancer patients are at increased risk of complications from COVID-19, particularly with tyrosine kinase inhibitors and immune checkpoint inhibitors?</b></p>	<p>At this time there is no specific evidence with respect to COVID-19 infection complications associated with any cancer systemic therapy regimens. The only available data is reported by Liang et al (Lancet Oncol, <a href="http://dx.doi.org/10.1016/S1470-2045(20)30096-6">http://dx.doi.org/10.1016/S1470-2045(20)30096-6</a>) on a prospective cohort of 1571 patients with COVID-19, 18 of which had a prior history of cancer, found that patients with a history of cancer had a higher incidence of severe events – defined as the percentage of patients admitted to an intensive care unit requiring invasive ventilation, or death – compared with other patients. However, in correspondence related to the report Xia et al (Lancet Oncol, <a href="https://doi.org/10.1016/S1470-2045(20)30150-9">https://doi.org/10.1016/S1470-2045(20)30150-9</a>) state that these 18 patients represent a heterogeneous group and are not an ideal representation of the entire population of patients with cancer.</p> <p>EVIDENCE: Article identified in PubMed search conducted March 11, 2020.</p>

## Disclaimer

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## Search Strategies

### PubMed Search 1:

Date: March 11, 2020

Terms: related to COVID-19 and hematological malignancies (e.g. “myeloma”, “leukemia”, “lymphoma”, etc.)

### PubMed Search 2:

Date: March 9, 2020

Terms:

1. Cancer[Title/Abstract] (1,669,548 hits)
2. "COVID-19" [Supplementary Concept] OR "2019ncov"[tiab] OR "2019 ncov"[tiab] OR "novel coronavirus"[tiab] OR "novel corona virus"[tiab] OR ((coronavirus[tiab] OR "corona virus"[tiab] OR cov[tiab] OR ncov[tiab]) AND (outbreak[tiab] OR wuhan[tiab])) OR COVID-19[tiab] OR "covid 19"[tiab] OR ((coronavirus[tiab] OR "corona virus"[tiab]) AND 2019[tiab]) (1825 hits)
3. 1 AND 2 (23 hits)

PubMed Search 3: Additional searches for unindexed publications that did not yield additional relevant results:

Date: March 10, 2020

((inprocess[*sb*] OR PubMednotmedline[*sb*] OR (publisher[*sb*] NOT pubstatusnihms[All Fields] NOT pubstatuspmcsd[All Fields] NOT pmcbook[All Fields])) AND (cancer[TIAB] OR "neoplasms"[MeSH Terms]) AND (2019[tiab] OR 2020[tiab])) AND ("COVID-19"[Supplementary Concept] OR "2019ncov"[tiab] OR "2019 ncov"[tiab] OR "novel coronavirus"[tiab] OR "novel corona virus"[tiab] OR ((coronavirus[tiab] OR "corona virus"[tiab] OR cov[tiab] OR ncov[tiab]) AND (outbreak[tiab] OR wuhan[tiab]))) OR COVID-19[tiab] OR "covid 19"[tiab] OR (coronavirus[tiab] OR "corona virus"[tiab]))

From the search of the literature and reference lists of relevant articles, a total of 18 articles were identified (1-18). In addition, the grey literature was searched (WHO, CDC, IDSA, etc.) for additional information to inform the questions of interest.

Google Scholar:

Date: March 10, 2020.

Terms: (Cancer AND ("COVID-19" OR "2019ncov" OR "2019 ncov" OR "novel coronavirus" OR "novel corona virus" OR covid 19 OR covid 19" OR ((coronavirus OR "corona virus" OR cov OR ncov) AND (outbreak OR wuhan)) OR ((coronavirus OR "corona virus") AND 2019))). Date March 10.

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