

Impacts of COVID-19 in Oncology

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Disclosures

- There are no relevant financial interests to disclose for myself or my spouse/partner from within the last 12 months.



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Objectives

- Appraise guideline updates that impact oncology care during COVID-19 Pandemic
- Recognize practice changes implemented to protect cancer patients during COVID-19
- Identify impacts to oncology research trials during COVID-19



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What guidelines or guidance from national organizations have you relied on during pandemic?

- None
- National Comprehensive Cancer Network (NCCN)
- Combination of NCCN/ American Society of Clinical Oncology (ASCO)
- NCCN/ASCO/ European Society of Medical Oncology (ESMO)

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COVID-19 and Oncology Patients

- PubMed Search October 2020 revealed 3,516 results
- Patients with cancer have about a 3.5-fold increase risk of need for mechanical ventilation, ICU admission, or dying¹
- Meta-analysis show odds ratio for increased risk of death in COVID-19 patients with cancer ranging 1.66 – 3.16²⁻⁵
- Primary risk for cancer patients is access to care¹

¹Al-Quteimat OM, Amer AM. Am J Clin Oncol. 2020;43(6):452-455; ²Giannakoulis et al, JCO Glob Oncol 2020; 6: 799-808; ³Tan et al, Int J Cancer 2020; 1-12; ⁴Zhou et al, Int J Infect Dis 2020; 99: 47-56; ⁵Sing et al, Diabetes Obes Metab [published ahead of print, 2020 Jun 23]

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COVID-19: Guidance for Oncology Patients

- National Comprehensive Cancer Network (NCCN)
- European Society Medical Oncology (ESMO)
- American Society Clinical Oncology (ASCO)
- American Society of Transplantations and Cellular Therapy (ASTCT)
- European Society for Blood and Marrow Transplantation (EBMT)
- American Society for Radiation Oncology (ASTRO)
- The Society of Surgical Oncology (SSO)
- National Institute of Health and Care Excellence (NICE)



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COVID-19 Risk in Cancer Patients

In Cancer Patients, Categories at Risk Include:

- Patients receiving chemotherapy, or who have received chemotherapy in the last 3 months
- Patients receiving extensive radiotherapy
- People who have had bone marrow or stem cell transplants in the last 6 months, or who are still taking immunosuppressive drugs
- People with some types of blood or lymphatic system cancer which damage the immune system, even if they have not needed treatment (for example, chronic leukaemia, lymphoma or myeloma)


Specific risk groups are cancer patients with an impaired immune system such as:

- Leukocytopenia
- Low immunoglobulin levels
- Long lasting immunosuppression (steroids, antibodies)

Special attention should be considered in case of recent new symptoms such as:

- Fever
- Coughing
- Sore throat
- Difficulty breathing
- Muscle pain
- Tiredness
- Anosmia
- Dysgeusia

ESMO Guidelines 2020: Cancer Patient Management During the COVID-19 Pandemic



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Cancer Patient Prioritization

Cancer Patient Prioritisation

The tiered approach of ESMO in delivering a guidance for cancer patients during the COVID-19 pandemic is designed across three levels of priorities, namely: tier 1 (high priority intervention), 2 (medium priority) and 3 (low priority) – defined according to the criteria of the Cancer Care Ontario, Huntsman Cancer Institute and ESMO-Magnitude of Clinical Benefit Scale (ESMO-MCBS), incorporating the information on the value-based prioritisation and clinical cogency of the interventions.

High Priority

- Patient's condition is immediately life threatening, clinically unstable and/or the magnitude of benefit qualifies the intervention as high priority (e.g. significant overall survival [OS] gain and/or substantial improvement in quality of life [QoL])


Medium Priority

- Patient's situation is non-critical but delay beyond 6 weeks could potentially impact overall outcome and/or the magnitude of benefit qualifies for intermediate priority

Low Priority

- Patient's condition is stable enough that services can be delayed for the duration of the COVID-19 pandemic and/or the intervention is non-priority based on the magnitude of benefit (e.g. no survival gain with no change nor reduced QoL)

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Risk for Complications with Treatment Delay

TABLE 1. Lists Some Examples on Low and High-risk Conditions Where Cancer Treatment Delay Can Affect Clinical Outcomes^{4,15}

Low Risk for Complications With Treatment Delay	High Risk for Complications With Treatment Delay
Nonmelanoma skin cancers	Oncologic emergencies (spinal cord compression, hypercalcemia, etc.)
Chronic hematological cancers	High-grade sarcoma
Low grade lymphomas	Large mass (> 2 cm) lung mass
Nonlocally advanced HR+ breast cancers	Acute leukemias and aggressive lymphomas
Most thyroid cancers	Head and neck cancers
Radiotherapy for low-risk prostate cancers	Chemotherapy for testicular and rectal cancers
Palliative indications without survival benefits	Radiotherapy for gynecologic, rectal, lung, and neck cancers

Treatment prioritization decisions should also consider patient's age, comorbidities and physician's clinical judgment.


Al-Qateimat OM, Amer AM. Am J Clin Oncol. 2020;43(6):452-455

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General Guidelines

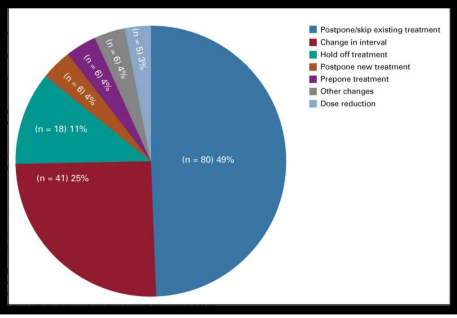
- Reconsider risk/benefit of cancer treatment
- Reduce number of visits to outpatient facilities
 - Use phone/tele-health when able
- If on oral therapy, monitor remotely if able
 - Provide at least three courses of treatment
- Mandatory COVID-19 health education
- Cancer patients with fever
 - Do not evaluate in ambulatory clinics
 - Rule out COVID-19
 - Treat stable patients at home with oral therapy

NCCN 2020: https://www.nccn.org/eovid-19/pdf/HGF_COVID-19.pdf



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COVID-19 Changes in Oncology Prescribing



Change	Percentage	n
Postpone/skip existing treatment	49%	80
Change in interval	25%	41
Hold off treatment	11%	18
Postpone new treatment	9%	14
Prepone treatment	8%	12
Other changes	5%	8
Dose reduction	3%	5

Lin D.D., Meghal T, Murthy P., et al. JCO Global Oncology 2020.6:1298-1305


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General Guidelines

- Neutropenia related considerations
 - Expand prophylactic use of granulocyte-stimulating factor (G-CSF)
 - Expand therapeutic use of G-CSF if patients develop febrile neutropenia (FN) to include all patients
 - Consider use of G-CSF to accelerate post-hematopoietic cell transplant recovery of absolute neutrophil count
 - Self-administered daily filgrastim or use of pegfilgrastim
 - Palliative patients – consider regimens unlikely to cause FN
 - Prophylactic and/or stand-by antibiotics use expanded
 - Fluoropyrimidine patients - test for DPD deficiency

NCCN 2020: https://www.nccn.org/eovid-19/pdf/HGF_COVID-19.pdf

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General Guidelines

- Anemia and Erythropoietin-Stimulating Agents (ESA)
 - If limited blood supply
 - Restrictive thresholds for red blood cell transfusion
 - In the short term, broadening use of ESA therapy +/- IV iron supplementation to manage anemia in patients with malignancy requiring blood transfusion support
 - *increased risk of thrombosis – use lowest ESA dose to avoid transfusion
 - Consider long-acting ESA
 - Broaden use of guidelines for those “who refuse blood transfusions” to include when transfusion support is not available

NCCN 2020: https://www.nccn.org/covid-19/pdf/HGF_COVID-19.pdf
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TOPA

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General Guidelines

- Thrombocytopenia-related considerations
 - Lowered threshold for transfusion (platelet <10k)
 - Consider adding prophylactic antifibrinolytics for patients with platelets < 10k if shortage
 - Hold antifibrinolytics for platelet count > 30k
 - Do not use if embolic stroke, thromboembolism, or urinary tract bleeding
 - Consider use of thrombopoietin mimetics (eg, romiplostim)
 - Severe thrombocytopenia post chemotherapy

NCCN 2020: https://www.nccn.org/covid-19/pdf/HGF_COVID-19.pdf

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General Guidelines

- Bone Complications
 - Consider withholding bone modifying agent
 - Dental exam considerations
 - Bisphosphonates for metastatic cancer –every 3-month intervals
 - Consider denosumab SC administered at home
 - Use of oral agents can be considered
- Cytokine Release Syndrome
 - Consider intensive care bed shortages prior to initiation of CAR-T

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Which of the following was a recommendation made for treatment of oncology patients during COVID-19?

- A. If applicable, change patients to oral chemotherapy
- B. Consider increasing interval between chemotherapy or immunotherapy treatments where warranted
- C. Consider lowering threshold for blood and platelet transfusions
- D. All of the above

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Practice Changes Related to COVID-19

- Reduce in-person visits
- Telephone or tele-health visits increased
- Staffing model changes
- COVID-19 screening patients and staff
- Restrictions on visitors
- More frequent cleaning of exam rooms, infusion room, etc
- Personal Protective Equipment

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Which changes have occurred to protect cancer patients during the pandemic?

- A. Increase in office visits
- B. Limitations of visitors at appointments
- C. Implementation of watch and wait where appropriate
- D. B and C only

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COVID-19 Guidance for Clinical Trials

- US Food and Drug Administration (FDA)
- US National Cancer Institute (NCI)*
- European Medicines Agency (EMA)
- Centers for Disease Control and Prevention (CDC)
- National Institutes of Health (NIH)

*Oncology specific

TOPA

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Impact of COVID-19 on Clinical Trials

- Clinical trials disrupted worldwide
 - Estimated 80% were stopped or interrupted
- Reorientation toward COVID-19 research
- For current trials
 - Shift of non-medication visits to phone or tele-health
 - Oral medication mailed to patients' home
- FDA issued guidance
- Academic medical centers financial losses spill over into research

van Dorn, Aaron. *Lancet*. 2020; 395(10250):523-524

TOPA

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In which of the following ways has COVID-19 impacted oncology clinical trials?

- No impact
- Non-COVID-19 trials were suspended or stopped
- Academic medical centers are the only place research is occurring
- All of the above

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Open Discussion – How was your practice changed due to COVID-19?

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Any Questions?

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