Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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REFERENCES

1. Holch JW, Held S, Stintzing S, et al. Relation of cetuximab-induced skin toxicity and early tumor shrinkage in metastatic colorectal cancer patients: results of the randomized phase 3 trial FIRE-3 (AIO KRK0306). *Ann Oncol*. 2020;31(1):72—78.
2. Le Louedec F, Alix-Panabières C, Lafont T, et al. Cetuximab pharmacokinetic/pharmacodynamics relationships in advanced head and neck carcinoma patients. *Br J Clin Pharmacol*. 2019;85(6):1357—1366.
3. Amador ML, Oppenheimer D, Perea S, et al. An epidermal growth factor receptor intron 1 polymorphism mediates response to epidermal growth factor receptor inhibitors. *Cancer Res*. 2004;64(24):9139—9143.
4. Graziano F, Ruzzo A, Loupakis F, et al. Pharmacogenetic profiling for cetuximab plus irinotecan therapy in patients with refractory advanced colorectal cancer. *J Clin Oncol*. 2008;26(9):1427—1434.
5. Ferris RL, Lenz HJ, Trotta AM, et al. Rationale for combination of therapeutic antibodies targeting tumor cells and immune checkpoint receptors: harnessing innate and adaptive immunity through IgG1 isotype immune effector stimulation. *Cancer Treat Rev*. 2018;63:48—60.

French Sarcoma Group proposals for management of sarcoma patients during the COVID-19 outbreak

This letter proposes general recommendations for the management of sarcoma patients during the coronavirus disease-2019 (COVID-19) outbreak, for which we propose an adaptation of current recommendations for clinical practice. Patients with suspected COVID-19 should be screened for the presence of the virus. If confirmed or highly suspected (clinically or by CT scan), any treatment must be postponed at least 15 days after the start of the symptoms and when the patient has recovered. Multidisciplinary tumor boards (MDT) with virtual discussion remain the best option when complex cases have to be discussed.

For sarcoma in localized phase, the European Society for Medical Oncology (ESMO) Clinical Practice Recommendations for sarcomas apply without modification for patients without COVID-19 symptoms.[1—3]

It is not recommended to delay surgery for operable patients without COVID symptoms, in particular for grade 2—3 soft tissue sarcoma, bone sarcoma, gastrointestinal stromal tumor (GIST) and visceral sarcoma.

In the case of high-risk surgery (e.g. retroperitoneal sarcoma), postoperative resuscitation capacities should be ensured. If not, preoperative systemic or radiotherapy treatment may be proposed.

Adjuvant radiation therapy for soft tissue sarcoma should not be delayed.

For soft tissue sarcoma, neoadjuvant chemotherapy should presently be reserved for patients who are inoperable or in whom the only possible intervention is mutilating. Preoperative radiotherapy, depending on location and histological type, is also an alternative.

For Ewing's sarcoma and osteosarcoma, it is recommended to maintain neoadjuvant and adjuvant chemotherapy regimens without modification for patients without symptoms of COVID-19 infection.

For alveolar and embryonal rhabdomyosarcoma, neoadjuvant and adjuvant chemotherapy programs are recommended without modification for patients without symptoms of COVID-19 infection.

For connective tumors with intermediate malignancy (e.g. desmoid tumors), active surveillance is recommended; in the event of progressive disease, an option without nonsteroidal anti-inflammatory drugs is favored.[4]

For GIST at high risk of relapse, adjuvant treatment with imatinib should be initiated according to guidelines.

For advanced soft tissue sarcoma, first-line treatment remains chemotherapy with doxorubicin, with systematic application of granulocyte growth factors. Combination therapy can be proposed if tumor shrinkage is required (doxorubicin plus dacarbazine if leiomyosarcoma, or doxorubicin plus ifosfamide for other histotypes with limited pulmonary metastases, without extrathoracic extension and accessible to chest surgery).

In second-line treatment and beyond, treatment may be prescribed according to practice recommendations: oral treatments (pazopanib, or even regorafenib) may be preferred to limit the movement of patients in the ambulatory setting for nonliposarcoma sarcoma. For liposarcomas, options are trabectedin or eribulin.

For GIST, the recommendations apply for imatinib in the metastatic phase (then sunitinib and regorafenib).

For bone sarcomas with metastasis at diagnosis, the classical first-line treatment (e.g. VDC-IE for Ewing's sarcoma) is recommended. For metastatic relapse of bone sarcoma, topotecan and cyclophosphamide for Ewing's sarcoma and for osteosarcomas, antiangiogenic treatment (e.g. regorafenib) can be proposed.

Complex treatment decisions in the context of COVID-19, including off-label use or clinical trials, should be discussed in sarcoma virtual multidisciplinary tumor boards.

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REFERENCES

1. Casali PG, Bielack S, Abecassis N, et al. Bone sarcomas: ESMO-PaedCan-EURACAN Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2018;29(suppl 4):iv79—iv95.
2. Casali PG, Abecassis N, Aro HT, et al. Soft tissue and visceral sarcomas: ESMO-EURACAN Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2018;29(suppl 4):iv51—iv67.
3. Casali PG, Abecassis N, Bauer S, et al. Gastrointestinal stromal tumours: ESMO-EURACAN Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol*. 2018;29(suppl 4):iv68—iv78.
4. Kasper B, Baumgarten C, Garcia J, et al. An update on the management of sporadic desmoid-type fibromatosis: a European Consensus Initiative between Sarcoma PAtients EuroNet (SPAEN) and European Organization for Research and Treatment of Cancer (EORTC)/Soft Tissue and Bone Sarcoma Group (STBSG). *Ann Oncol*. 2017;28(10):2399—2408.