The outcome of musculoskeletal tumour care is dependent on early diagnosis and appropriate treatment in a multidisciplinary setting [1]. This requires enormous commitment of resources that may be limited in many less developed countries.

The first case of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) disease was reported in China in November 2019, tagged as coronavirus disease 2019 (COVID-19) by the World Health Organization (WHO). It was declared a pandemic by the WHO in March 2020. Since then, health systems all over the world have experienced significant difficulties with patient care both for COVID-19 and other diseases including treatment of patients with musculoskeletal tumours.

The global crises that it engendered pushed many countries to come up with containment policies, the commonest of them all being lockdown [2]. Although nationwide lockdown has been the most common response by majority of countries, there are growing concerns regarding the capacity of the resource-challenged countries to cope with a surge in COVID-19 cases in addition to the burden of managing other disease conditions in a fragile healthcare system. Furthermore, the economic losses consequent upon the total lockdown also had a negative impact on healthcare funding [3, 4].

There is considerable variability in the response of the healthcare systems to the pandemic between different countries, with advanced countries like Sweden continuing to function relatively unabated during the pandemic, while most others ceased to function normally due to the nationwide lockdown [5, 6].

Prior to the COVID-19 pandemic, resource-challenged countries experienced difficulties in early diagnosis, shortage of specialist and funding for the treatment of musculoskeletal tumours. Most patients pay out of pocket for healthcare expenses, including the multimodal treatment for cancers [7]. In Nigeria, a nationwide lockdown was imposed with effect from 30 March 2020 [8], and this further compounded the challenges of the already fragile healthcare sector. There was a severe shortage of personnel protective equipment (PPE) and suboptimal COVID-19 testing capacity. This led to many hospitals deferring elective surgeries and outpatient clinics in order to preserve resources such as hospital beds and intensive care unit (ICU) spaces to manage COVID-19 patients.

Nigerian government containment policies
Following a nationwide presidential address on 29 March 2020, a Presidential Task Force (PTF) was set up to coordinate the COVID-19 containment efforts. The President had already in his address imposed an initial 2-week total lockdown in the worst-hit states of Lagos, Ogun and the Federal Capital Territory. The lockdown was subsequently extended for another 2 weeks before gradual easing of the lockdown commenced.

What became clear was the fact that the Nigeria health sector was patently ill-prepared to grapple with the COVID-19 pandemic and also take care of the other health conditions. The scarce resources were re- channelled to the care of COVID-19 patients, and this was still inadequate. This severely affected the care of patients with musculoskeletal tumours; many of whom were unable to access care or continue the already established management plans and protocols due to the numerous restrictive measures in place. This was further compounded by the morbid fear of contracting COVID-19 infection that gripped health practitioners and unavailability of working tools, including PPE.

Lagos state being the epicentre of the pandemic in Nigeria and with more than half of the total COVID-19 disease burden in the country came up also with containment policies, many of which were to re-enforce the federal government policies or to refine them. The National Orthopaedic Hospital, Igbobi, an establishment within Lagos state and the main public sector provider of orthopaedic care in the South West of Nigeria, also had to conform with the policies of the state government.
Impact on patients
The general public was not exempted from the massive fear that first greeted the arrival of COVID-19. Patients deserted the hospitals, even when urgent treatment was needed; those who presented in the tertiary centres were patients with either life-threatening or limb-threatening diseases. This further impaired the prognosis. The reasons for the delay in presentation included transportation challenges as a result of the lockdown, the fear of contracting COVID-19 in the hospitals and the fear of getting harmed by some overzealous security agents in trying to enforce the lockdown. It is on record that as at 15 April 2020, Nigerian security agents had killed more people while enforcing the lockdown than COVID-19 pandemic [9]. There was also the fear of being rejected in the hospitals and the financial difficulties occasioned by the disruption of the means of livelihood due to the total lockdown.

Although efforts were made to ensure prompt management of musculoskeletal tumours by classifying surgeries for cancer as an emergency, there was still some delay in diagnosis and treatment. With the easing of the lockdown, many of these patients presented with advanced diseases in a tertiary bone tumour unit in Lagos. The impact of the delay is yet to be quantified.

Impact on healthcare practitioners
The healthcare practitioners involved in the care of musculoskeletal tumours also experienced numerous difficulties with the arrival of the COVID-19 pandemic. Many had challenges commuting to work due to the activities of some overzealous security agents and the numerous road blocks. Nevertheless, there was also the initial fear of contracting the virus, especially in the face of severe shortage of PPEs. Many medical practitioners ended up getting infected, and some lost their lives in the process. According to the Nigerian Association of Resident Doctors (NARD) in its regular update, as on 2 October 2020, 321 doctors were reported to have contracted the virus, with a fatal outcome in 16 medical doctors. The healthcare workers in the public sector were poorly motivated and poorly remunerated, which resulted in various industrial actions by groups of healthcare practitioners.

Access to COVID-19 tests when required was also suboptimal. The testing for patients with musculoskeletal tumours (when required) took several days for confirmation or exclusion, and this caused delays in the treatment of musculoskeletal tumours.

Impact on training of healthcare practitioners
Trainee medical and surgical oncologists had their postings and training programmes disrupted due to the measures adopted for preventing COVID 19 such as banning of large gathering of people. The measures adopted to ensure continual training of residents and care of the patients with musculoskeletal tumours, while limiting person to person contacts, included:

- Zoom meetings and consultations
- WhatsApp video consultations
- Board room meetings before the ward rounds to reduce time spent on the wards
- Downsizing of the number of team members attending each ward by splitting the team into two to attend to different wards, etc.

Although these measures were of immense help to sustain reasonable activities, they were still not enough to achieve normal activities in the hospital. Virtual training programmes and consultation were hindered by various technical hitches including poor and expensive internet facilities.

Going forward
Government at all levels should make PPE readily available for use when needed and improve access to testing for COVID-19; these would improve prompt diagnosis of diseases such as musculoskeletal cancers. There should also be improvement in the remuneration of all healthcare workers in resource challenged systems to ensure motivation and assure services even in trying times. Massive enlightenment campaign of the general public should reduce their fear and anxiety.

There is a need for the government to reform the existing National Health Insurance Scheme in order to increase the coverage and make it more accessible. Health institutions should also come up with unambiguous and acceptable policies on how to continue to render care to patients with musculoskeletal tumours in this COVID-19 pandemic period, given that it has become obvious that this pandemic is not going away anytime soon. Oncologists and their trainees should put fear aside and follow scientifically proven methods and continue to care for patients with musculoskeletal tumours while taking adequate precautions to protect themselves. It is hoped that the recent availability of effective vaccines for COVID-19 will be of major benefit when once most of the population have been vaccinated.

Conclusions
The challenges posed by COVID-19 pandemic on the care of patients with musculoskeletal tumours are enormous, especially in a resource poor country like Nigeria. All hands must be on deck to continue to care for these patients and improve the prognosis. The overall impact of COVID-19 pandemic on the prognosis of musculoskeletal tumours is currently being studied.

Conflict of interest and funding
The authors have not received any funding or benefits from industry or elsewhere to conduct this study.
References

1. Steven J, Parry M. Tumours. In: Blom AW, Warwick D, Whitehouse MR, eds. Apley & Solomon’s system of orthopaedics and trauma. 10th ed. London: CRC Press, 2018; p. 179–228.
2. Kumar VS, Banjara R, Thapa S, Majeed A, Kapoor L, Janardhanan R, et al. Bone sarcoma surgery in times of COVID-19 pandemic lockdown- early experience from a tertiary centre in India. J Surg Oncol 2020; 122: 825–30. doi: 10.1002/jso.26112
3. COVID-19 clinical research coalition: global coalition to accelerate COVID-19 clinical research in resource limited settings. The Lancet 2020; 395(10233): 1322–25. doi: 10.1016/S0140-6736(20)30798-4
4. Unicef Annual Report 2020. Unicef Supply Division, Copenhagen, Denmark.
5. COVID-19 pandemic in Sweden. Wikipedia 2020 [cited 30 September 2020].
6. Council on Foreign Relations. Comparing six health-care systems in a pandemic.
7. Eyesan SU, Obalum DC, Nnodu OE, Abdulkareem FB, Ladejobi AO. Challenges in the diagnosis and management of musculoskeletal tumours in Nigeria. International Orthopaedics (SICOT) 2009; 33: 211–13. doi: 10.1007/s00264-007-0475-x
8. Eze A. Full speech: Buhari on COVID-19 pandemic. Nigeria: Vanguard Media Limited, Lagos; 2020
9. Nnochiri I. Security agents killed more Nigerians within 14 days than coronavirus: NHRC. Vanguard Media Limited; 2020.

*Adesegun Abudu
Royal Orthopaedic Hospital, Bristol Road South, Birmingham, B6 1 9BG.
United Kingdom
Email: sabudu@btinternet.com