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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Strategic planning for maxillofacial trauma and head and neck cancers during COVID-19 pandemic– December 2020 updated from Germany

Sir,

We read with great interest the review on otorhinolaryngology/head and neck surgery (ORL-HNS) practice during the COVID-19 pandemic recently published in this journal by Salari [1]. We would like to share our current protocol for organizing ORL-HNS patient care in Germany (updated in December 2020) (Fig. 1).

In Germany, all recommendations concerning infections have been developed by the Robert Koch Institute (RKI), a German governmental organization responsible for disease control and prevention and related researches. Until December 2, 2020, the RKI announced a total of 1,084,743 COVID-19 cases with a mortality rate of ca. 1.6% in this country (more details on https://www.rki.de). The lockdown measure has been forced again since November 1, 2020 to combat with the Coronavirus second wave. On the other hand, the curfew also hampers hospital volume. The University Hospital of Leipzig, Germany, recently revealed a significant decrease in maxillofacial/head and neck surgeries during the curfew [2]. This inevitably affects not health care economy but medical education and residency training.

On 3 June 2020, the German Association for Otolaryngology/Head and Neck Surgery announced its clinical practice guideline concerning protection of healthcare personals and patients during the COVID-19 pandemic. This guideline can be applied only for otolaryngologists but also for maxillofacial surgeons, dentists and pneumologists, who often contact with the patient's airway [3,4]. During this COVID-19 second wave, the RKI recommends the antigen (quick) test as a screening method, in addition to standard real-time polymerase chain reaction (RT-PCR) test, for all patients undergoing hospitalization. The patients with COVID-19 symptoms will be immediately isolated until the RT-PCR test is launched, because the quick test has lower sensitivity ($\geq$80%) and specificity ($\geq$ 97%) than the RT-PCR test (98.8% to 99.7% sensitivity; 97.8% to 98.6% specificity). Moreover, it is noteworthy that the "positive" quick test is commonly seen when the symptom begins. Conversely, the RT-PCR test can be positive during the inoculation of the infection until after the infection heals. Last but not least, operating theater management must depend not only on the priority (surgical indication) but also on the patient's symptoms, history and test results related to COVID-19 (Fig. 1) [3–5].

Institutional review board approval

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Declaration of competing interest

The authors indicate full freedom of manuscript preparation and no potential conflicts of interest.

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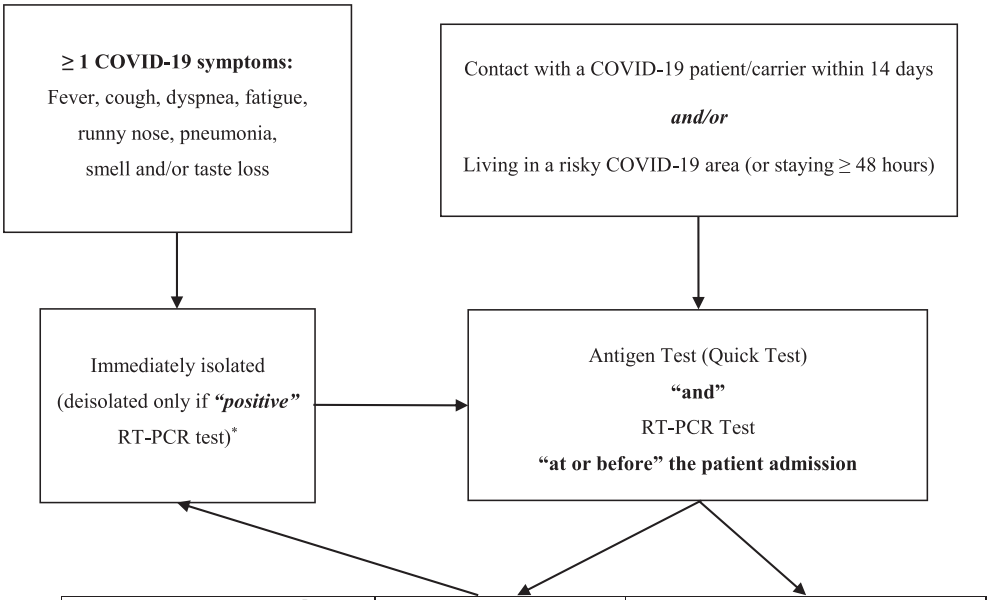

Surgical indications⁋	"positive" Quick Test	"negative" Quick Test
N0, N1, and probably N2	Operation with "Personal Protective Equipment (PPE)"	Operation with FFP2 (N95) or FFP3 (N99), especially aerosol-forming operations and surgeries involving the airway and/or oral cavity
N3 and urgency	Operation when "negative" RT-PCR Test If impossible to wait, operation with PPE	

Fig. 1. Flow chart showing the current patient management during the COVID-19 second wave in Germany, updated in December 2020 [3–5].
Note:
*If a CT or MRI is needed for diagnosis and treatment planning for head and neck diseases, the patient "**with ≥ 1 COVID-19 symptoms**" should receive extended CT/MRI to the thorax.
⁋In Germany, the surgical indications are roughly divided into 5 subgroups [5]:
N0 with the highest priority requires immediate surgery, e.g. life-threatening trauma;
N1 with high priority requires surgery when an operating theater is available, e.g. massive retrobulbar hematoma with visual changes after facial fracture;
N2 with emergent priority goes to the surgery within 6 h after adequate fasting time, e.g. deep neck infection that can cause airway obstruction;
N3 with normal priority (mainly elective cases) can be delayed until the end of elective procedural program, probably 12–24 h, e.g. skin tumors;
and **urgency priority**, e.g. recurrent epitaxis in patients with anticoagulants.