

# Oral cancer diagnosis during the COVID-19 pandemic in an oral pathology laboratory in Rio de Janeiro, Brazil

Dear Editor,

In Brazil, approximately 15,200 cases of oral cancer (11,200 cases in men and 4,000 in women) are expected for the triennium 2020–2022 (Atty & Ribeiro, 2020; Ferlay et al., 2019; World Health Organization, 2020). Currently, the number of diagnosed oral cancer cases is lower than expected, as Brazil has become one of the world epicentres of the coronavirus disease (COVID-19) pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), with more than 4.5 million cases and 140,000 deaths to date. We herein contribute with our experience in an oral pathology laboratory in the south-eastern region of Brazil on oral cancer diagnoses during the first 6 months of the COVID-19 pandemic.

On 16 March 2020, the Brazilian government established the closure of universities and, therefore, the suspension of activities of most university oral pathology laboratories in Brazil. Notwithstanding, the oral pathology laboratory at the School of Dentistry of the Federal University of Rio de Janeiro (UFRJ) remained open in order to contribute to the continued provision of oral cancer diagnosis, similar to other laboratories in different Brazilian regions. On 16 September, 544 oral pathology reports had been signed out at UFRJ during the last 6 months, of which 80 cases were diagnosed as oral malignancies (72 cases of squamous cell carcinoma, 4 cases of adenocarcinoma, and 4 cases of lymphoma). The total number of cases had decreased by 51.5% in comparison with the same period in 2019, when 1,121 cases were diagnosed, of which 118 were malignant tumours (95 cases of squamous cell carcinoma, 5 cases of basal cell carcinoma, 12 cases of adenocarcinoma, 5 cases of lymphomas, and 1 case of sarcoma); therefore, the malignancy rate increased from 10.5% in 2019 to 14.7% in 2020. Similarly, there were 58 cases (5.2%) of oral potentially malignant disorders (oral epithelial dysplasia) in the same period of 2019 against 40 cases (7.4%) in 2020. The number of oral pathology cases has been increasing in the last 6 months, 145 cases (26.7%) being diagnosed in the first three months and 399 cases (73.3%) in the last three months (Table S1). These numbers are in accordance with those reported by Gomes, Schuch, Tarquinio, Etges & Vasconcelos (2020) from the Federal University of Pelotas in the southern region, who observed a 69.9% decrease in the number of oral specimens collected between March and April 2020 (Gomes, Schuch, Tarquinio, Etges, & Vasconcelos, 2020). They also reported that potentially malignant disorders and oral squamous cell carcinomas decreased by 89% and 44%, respectively, with an increase in the proportion of malignancy from 9.26% in 2019 to 20% in 2020. These populations are from the south-eastern (Rio de Janeiro-RJ)

and southern (Pelotas-RS) regions of Brazil, which also experienced the most significant decrease in the number of soft tissue biopsies of the mouth performed in Brazil's National Health System (*Sistema Único de Saúde*—SUS) in 2020 (da Cunha et al., 2020).

Despite the lack of consensus about the most effective biosafety practices, pathologists and laboratory technicians have been trying to adopt measures to minimize the possibility of COVID-19 spreading inside the pathology laboratory, particularly while handling specimens from the oral cavity, since SARS-CoV-2 strain RNA has already been identified in squamous cell carcinoma of the tongue (Guerini-Rocco et al., 2020; Lamas et al., 2020). Our work team, composed of three oral pathologists, two laboratory technicians, and two post-graduate students, was organized in alternating weeks between presence at work and the home office, in an attempt to avoid a high number of people inside the laboratory at the same time (maximum of 4 professionals per room), similar to what has been proposed by other authors (Lamas et al., 2020; World Health Organization, 2020). Elderly professionals and those with systemic health illness were recommended to work at home exclusively.

All plastic pots containing properly formalin-fixed specimens arriving in the laboratory were considered contaminated and thus carefully cleaned using 70% ethanol, which is available from dispensers placed in different rooms. Laboratory technicians and oral pathologists were encouraged to wear surgical scrubs and to use appropriate personal protective equipment, including fluid-resistant gloves, face shields, and FFP2/N95/KN95 respirator masks during histologic processing and macroscopic examination. The oral biopsy specimens were submitted to gross examination only after at least 6 hours of formalin fixation, and oral pathologists frequently disinfected gloves with 70% ethanol, changing gloves every 30 min, and washed their hands frequently, as suggested by Lamas et al. (2020). Unfortunately, digital pathology for remote working as implemented by Lopes et al. (2020) was not possible in our laboratory due to the high cost of a slide scanner (Lopes et al., 2020). Nevertheless, all cases were evaluated weekly and their pathology reports signed out by at least three oral pathologists, with persistent disinfection of work surfaces with 70% ethanol, including microscopes, before and after microscopic analysis. Every work team member has their body temperature measured daily, and, if any COVID-19-related symptom arose, it was registered, and the professional was requested to stay home for the following 14 days. To date, no case of COVID-19 infection has been detected in the UFRJ Oral Pathology laboratory.










The COVID-19 pandemic is an opportunity to force ourselves to adopt strict guidelines to keep a safe work environment at this Brazilian oral pathology laboratory, while maintaining, as effectively and humanely as possible, high-quality oral diagnoses for this population in Rio de Janeiro. All efforts were made to try to avoid delays in the treatment of oral cancer patients, providing a modicum of relief to some of the peaceful Brazilian people who do not deserve such a high number of deaths and such disrespect for public health.

#### AUTHOR CONTRIBUTIONS

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#### PEER REVIEW

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