Supplementary Materials:

**Figure 1:** Optical examination of the oral mucosa affected by the tumor

a) barely visible invasive OSCC of the palato-alveolar area under white light

b) clearly visible loss of fluorescence of the affected area

c) transient marking of the extent of fluorescence loss
d) barely visible invasive OSCC of the right lingual margin under white light

e) clearly visible loss of fluorescence of the affected area

f) transient marking of the extent of fluorescence loss

**Figure 2:** Permanent marking of loss of fluorescence by tattoo technique

a) various tattoo dyes for immediate specimen orientation

b) large syringe filled with a small amount of gentian, insulin syringes filled with
 tattoo inks

 **Table 1:** Gender distribution in both groups

This table shows the representation of each gender. Both groups are comparable and it is evident that men predominate.

 **Table 2**: The distribution of tumor origin in the oral cavity mucosa

This table shows the prevalence of affected areas of the oral cavity, the most common sites of OSCC were the tongue and floor of the oral cavity.

 **Table 3:** Tumor grade distribution in both groups

This table shows the distribution of histological grade in both groups.

 **Table 4:** Tumor stage distribution in both groups

This table shows the distribution of the clinical stage of the disease in both groups. In our study, we encountered advanced stages most often.

 **Table 5:** Comparison of mucosal margin status in both groups

This table describes the situation of the histological quality of the resection margins of both groups. It is evident that the study group achieves significantly better results.

 **Chart 1:** Trend of incidence and mortality of cancer of the upper aerodigestive system in the Czech
 Republic.

This graph shows the development trend of incidence and mortality of malignancies of the upper aerodigestive tract. The data source is the National Cancer Register, Czech Republic

 **Chart 2:** A box-whisker plot diagram showing the age distribution in both groups

Graphic representation of the age distribution of patients of both groups

 **Chart 3:** Mucosal margin status

Graphic representation of histological characteristics of mucosal resection margins

 **Chart 4:** Deep margin status

Graphic representation of histological characteristics of deep resection margins