Oral Cancer Diploma Program
(collaborative initiative of AO & IAOO)

1. Background

Oral cancer is managed by different surgical disciplines such as Oral and Maxillofacial Surgery, Otolaryngology, Surgical Oncology, and Plastic Surgery. Each of these specialties has a different focus, and this creates opportunities to learn from one another, which has enriched this subspecialty.

However, there is considerable disparity in the quality of care and training available worldwide in the field of oral oncology. Moreover, there is a lack of standardized training programs across different disciplines to address this neoplasm effectively. Thus, there is an urgent need for a standardized training program to equip surgeons with the necessary knowledge to manage oral cancer.

With the rapid adoption of digital communication in the post-COVID era and the increasing sophistication of online education, there is a global opportunity to bridge this gap through the creation of an online educational platform.

2. Goal of the program

It is the intention to provide the community of clinicians treating oral cancer with a structured educational program that addresses variability in practice, different clinical pathways, differences in caseload (treatment, confidence level), and patient demographics. The program offers surgeons (active or in training) evidence-based knowledge and non-technical skills that conform with the current standard of care in oral cancer. We envisage that this will lead to a Diploma in Oral Oncology for those who successfully complete the training, awarded jointly by the AO Foundation and IAOO.

3. Target audience for the program

The target audience comprises surgeons enrolled in head and neck surgery or oral oncology training programs, as well as practicing surgeons from various backgrounds (e.g., maxillofacial surgeons, head and neck surgeons, general surgeons, otolaryngologists, and plastic surgeons) who treat patients with oral cancer and seek to certify or update their knowledge in this field. The program is also aimed at residents who are keen to specialize in oral cancer management.

4. The Program

The program envisions a structured online learning program delivered over 10 months, enabling participants to gain substantial knowledge of the subject as well as non-technical skills. Upon completion of all program elements, participants must complete a summative assessment to receive the diploma. This oral cancer education program is designed, organized, and delivered in close collaboration between AO CMF and IAOO.

The learning pathway includes:

- **Online modules:** 10 modules delivered via a learning management system, including webinars, virtual meetings/discussions, interactive lectures, and videos.
- **Weekly discussion forums** moderated by renown content experts.
- **Bibliography** (links only).
- **Assessment:** online pre- post module assessment, as well as weekly assessment to test your knowledge.

Appendix I: Short Outline of the Online Program Modules

Module 1. Etiology and Prevention (duration ~4 weeks)
Competency: Describe and apply strategies to identify oral potentially malignant lesions and prevent oral cancer.

Learning Objectives:

- Describe cellular and molecular basis of oral carcinogenesis
- Recognize the effect of diet, tobacco, alcohol, betel, HPV, maladaptation of protheses in OC development
- Define the natural history of oral potentially malignant disorders (OPMDs)
- Identify the spectrum of oral potentially malignant disorders (OPMDs)
- Describe methods of diagnosing oral potentially malignant disorders (OPMDs) and oral cancer
- Evaluate the usefulness of diagnostic adjuncts of oral cancer (incl. early detection)
- Describe the principles and limitations of screening strategies
- Outline the management of oral potentially malignant disorders (OPMDs)
- Explain the concept of chemo prevention
- Discuss role of laser therapy in the management of oral potentially malignant disorders (OPMDs)
- Discuss role of photo dynamic therapy in the management of oral potentially malignant disorders (OPMDs)

Moduel 2. Epidemiology, Clinical Research and Biostatsistic (duration ~4 weeks)
Competency: Describe the epidemiology and the biostatistical methods related to oral cancer and apply to your practice.

Learning Objectives:

- Define global incidence and prevalence of oral cancer
- State the typical age, socioeconomic background, rate of tobacco and alcohol abuse of presenting patients
- Explain the DALY (disability adjusted life year) index
- Describe elements of measurement tools (outcome measures)
- Introduce and interpret measurements for survival analysis (e.g. Kaplan-Meir survival analysis, DSS, DFS, OS, PFS) (technical information including case example + challenges)
- Interpret measurements for quality of life and functional outcome analysis (s)
- Apply basic statistics

- Apply clinical research methodology
- Explain principles of evidence-based medicine
- Practice evidenced-based medicine

Module 3. Communication (duration ~4 weeks)

Competency: Identify and address communication challenges specific to care of oral cancer patients

Learning Objectives:

- Describe potential, common communication challenges related to patient care in oral cancer
- Recognize principles of active listening and effective comms. and how to apply to oral cancer care setting
- Set the scene (environment)
- Communicate clinician availability for the patient
- Conduct difficult conversations with patients and family (e.g., diagnosis, prognosis, recurrence, functional and emotional impact, changes to facial appearance, death)
- Engage patient and family in decision making
- Respect the patient's and family's perspective and choices
- Respect diversity, cultural beliefs and social values

Module 4: Diagnosis and Workup (duration ~3 weeks)

Competency: Ensure accurate diagnosis and perform a comprehensive workup for oral cancer patients

Learning Objectives:

General

- List common sites of oral cancer
- Describe pattern and mechanism of local invasion
- Describe pattern and mechanism of nodal and distant metastases
- Outline key features of histopathology of oral cancer

Patient History

- Recognize symptoms of PML and oral cancer
- Identify environmental risk factors (diet, tobacco, alcohol, work environment)
- Identify host risk factors (genetic, immunologic, obesity, microbiome)

Clinical examination

- Describe the signs of oral cancer
- Clinical signs of oral cancer and precancer
- Signs of oral cancer- Mucosal lesions (ulcer)
- Signs of oral cancer- Tongue deviation
- Signs of oral cancer- Halitosis
- Signs of oral cancer- Trismus
- Signs of oral cancer- Sialorrhea

- Signs of oral cancer- Facial nerve palsy
- Oral cancer symptoms - Pain (oral, otalgia, neck)
- Oral cancer symptoms - Swallowing disorders
- Oral cancer symptoms - Speech disorders
- Oral cancer symptoms - Trismus
- Oral cancer symptoms - Trigeminus neuralgia
- Examine the oral cavity
- Examine the neck
- Examine the cranial nerves
- Perform mirror examination of pharynx and larynx
- Perform flexible endoscopic examination
- Demonstrate photographic documentation of oral lesions
- Demonstrate schematic documentation of oral lesions

Investigations

- Describe indications and relative benefits of imaging modalities
- Describe indications and techniques for biopsy
- Describe basic pathological features of oral cancer
- Interpret imaging studies
- Select appropriate biopsy type for different locations
- Interpret basic pathological features of oral cancer

Medical comorbidities and performance status

- Describe common comorbidity scales (e.g. Karnofsky and ASA)
- Recognize the impact of nutritional and endocrine status on the outcome

<u>Module 5: Staging & outcome evalutation (duration ~4 weeks)</u>
Competency: Accurately stage oral cavity cancer

Learning Objectives:

Clinical staging criteria for TNM (Tumor, Nodes, Metastases)

- Outline general principles of staging
- Describe clinical staging criteria for tumor
- Describe clinical staging criteria for nodes

- Describe the clinical staging and patterns of metastases
- Recognize implications of staging
- Describe the basic principles of nomograms
- Recognize the importance of registering patient in a tumor registry
- Perform clinical TNM staging
- Apply nomogram to oral cancer patient
- Always analyze the images yourself
- Always stage all patients
- Always stage before starting treatment

Pathologic staging criteria

- Describe pathologic staging criteria for tumor
- Describe pathologic staging criteria for nodes
- Perform pathologic TNM staging based on available data
- Use staging for treatment decision making

Other prognostic factors

- Identify host related prognostic factors
- Identify histologic prognostic factors
- Identify molecular prognostic factors

Module 6. Treatment planning (duration ~3 weeks)

Competency: Develop the plan and appropriate recommendations for treatment

Learning Objectives:

Develop treatment plan / options

- Describe the role and components of a multidisciplinary tumor board (MDT)
- Describe how to organize and maintain an MDT
- Review components of multidisciplinary (MDT) treatment planning
- Describe the purpose and relevance of guidelines
- Describe the submission to an MDT: taking proper history, reviewed biopsy, staging etc.
- Define primary treatment options
- Define ressectability and operability
- Define neo-adjuvant treatment (planning)

Clinical Care pathway for the patient

Pre-treatment optimization:

- Recognize importance of pre-treatment dental examination and care, complications
- Recognize importance of speech and swallowing assessment
- Recognize the importance of pre-treatment nutrition
- Describe recommended care pathway(e.g., dental, nutrition, smoking, alcohol, timing,..)
- Recognize the importance of lifestyle assessment
- Identify resources to address psychological and social problems of cancer patients
- Develop evidence-based and patient centered recommendations in the MDT
- Recognize the considerations in communicating within multidisciplinary teams

Module 7: Surgery (duration ~12 weeks)

Competency: Plan and perform surgery

Learning Objectives:

Surgical Principles

- Outline the principles of quality cancer surgery (anesthetic considerations, enhanced recovery)
- Outline the principles of tumor ressection (approaches, bone ressection, functional implications, access)
- Outline the principles of margins determination
- Outline the principles of the management of N0 neck
- Outline the principles of the management of N+ neck
- Select the adequate approach to oral cavity cancer

Surgical Procedures

- Surgery for tongue and floor of mouth
- Perform partial glossectomy
- Perform sub-total glossectomy
- Perform total glossectomy
- Perform ressection of the floor of mouth and marginal mandibulectomy
- Surgery for lip
- Perform ressection of lip cancer
- Management of buccal mucosa, lower alveolus and RMT cancer
- Perform surgery for alveolar cancer
- Perform surgery for RMT (Retro molar trigon, Tuberosity of maxilla, buccal invading ITF (Infra temporal Fossa))
- Perform marginal mandibulectomy
- Perform segmental mandibulectomy
- Hard palate and upper alveolus
- Explain the principles of globe preservation
- Perform palatectomy
- Perform alveolar / infrastructure maxillectomy
- Perform hemi maxillectomy
- Perform total maxillectomy with preservation of Eye
- Perform total maxillectomy with exenteration of Eye
- Neck procedures
- Perform sentinel node biopsy
- Perform selective neck dissection
- Perform comprehensive neck dissection

Reconstruction Procedures

- Describe general principles of reconstruction
- Describe the principles of soft tissue reconstruction
- Describe the principles of mandibular reconstruction (incl. Load sharing / load bearing)
- Describe the principles of maxillary reconstruction
- Perform skin graft
- Perform nasolabial flap
- Perform temporalis flap
- Perform submental flap
- Perform FAMM flap
- Perform palatal flap

- Perform buccal fat flap
- Perform deltopectoral flap
- Perform supraclavicular flap
- Perform pectoralis major flap
- Perform illiac crest and rib graft
- Apply reconstruction plate
- Describe the principles of free flap reconstruction
- Identify key elements of virtual planning
- Perform radial forearm flap
- Perform fibular flap
- Perform anterolateral thigh flap
- Perform scapula flap
- Perform DCIA flap
- Perform mandibular reconstruction using virtual planning
- Perform maxillary reconstruction using virtual planning
- Identify goals and options for dental rehabilitation
- Plan palatal obturator

Postoperative Care

- Describe general principles of post operative care / ERAS
- Manage airway compromise
- Manage post-operative nutrition
- Monitor and manage free flap compromise
- Identify and treat post-operative infection
- Manage post-operative bleeding

Module 8. Adjuvant treatment (duration ~2 weeks)

Competency: Describe the principles of adjuvant treatment

Learning objectives

- Describe the indications and principles of post-operative radiation.
- Describe the indications and principles of post-operative chemo-radiation.
- Discuss the impact of patient factors (e.g., age, comorbidities, and performance status) on adjuvant treatment decisions. E.g., recognizing these factors aids in tailoring the surgical and subsequent treatment approach.
- Describe the principles of immuno-oncology.
- Describe the concept of neoadjuvant treatment.
- Describe the role of post-op adjuvant proton therapy (principles, patient selection).

Module 9. Post-treatment management and Survivorship (duration ~2 weeks)

Competency: Prevent and manage post treatment sequelae and recognize the importance of survivorship

Learning objectives

- Describe how to anticipate intermediate and long-term sequelae of treatment

- Define a rehabilitation plan based on post-treatment problems
- Identify resources to improve quality of life
- Describe how to implement QOL monitoring in clinical practice
- Describe how to prevent, detect, stage and manage ORN
- Manage radiation fibrosis dysphagia / neuromuscular dysfunction
- Describe how to prevent and manage Trismus, Manage xerostomia
- Describe how to manage lymphedema
- Define essential elements of patient reported outcomes PRO (XQ, MDADI, EORTC-HN35)
- Recognize and apply the concepts of acute and chronic pain management
- Outline the structure for recommendation for palliation
- Describe the value of interdisciplinary management for palliation
- Avoid unnecessary therapy (attitude)
- Describe the anticipation and planning of swallowing and speech rehabilitation in oral oncology
- Describe techniques of swallowing therapy following oral and maxillofacial reconstruction
- Describe the role of prehabilitation

Module 10. Surveillance and Salvage treatment (duration ~1 month)

Competency: Diagnose and manage recurrent disease and secondary malignancies

Learning objectives

- Define the elements of high-quality surveillance
- Develop a structured surveillance schedule
- Identify appropriate surveillance investigations
- Perform a relevant physical examination
- Recognize the challenges related to surveillance
- Define the role of tumor board in surveillance
- Identify logistical barriers for surveillance (e.g., distance, imaging availability, local expertise, finance)
- Recognize the long-term responsibility of the surgeon during surveillance
- Differentiate between second primary and tumor recurrence (time, pathology, location)
- Define the restaging criteria based on clinical examination and radiology
- Define the feasibility of salvage treatment
- Recognize the importance of reconstruction in salvage treatment
- Apply reconstructive techniques for salvage surgery
- Describe solutions to the vessel-depleted neck
- Define the feasibility of re-irradiation.