

# **NATIONAL EXPERT-BASED PRACTICE GUIDELINES**

**COLLEGE OF ONCOLOGY**

# **OESOPHAGEAL CANCER**

Version 1. 2021

## Oesophageal Cancer Guidelines Expert Panel

These guidelines have been developed by a national multi-institutional and multidisciplinary expert working party, based on international guidelines.

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## INTRODUCTION

This document provides an overview of the clinical practice guidelines for **oesophageal cancer** and covers a broad range of topics such as screening, diagnosis, treatment, supportive therapy, follow-up and the role of the general practitioner (GP).

A panel of experts develops these guidelines (see ['expert panel'](#)) comprising clinicians of different specialties and designed by their respective scientific societies.

The first version of these guidelines was published in 2020, based on a systematic review of clinical evidence available when they are derived. In 2021, these guidelines were updated by the working group.

These guidelines aim to assist all national care providers involved in caring for patients with oesophageal cancer and serve as a tool to support the local institutional guidelines and multidisciplinary tumour board (MDT) discussions in Belgium.

## SEARCH FOR EVIDENCE

These guidelines are derived from three existing national and international guidelines:

KCE guidelines 2012 [1] & KCE report on surgery indications 2019 [2], ESMO guidelines 2016 [3] & 2019 [4] and NCCN guidelines 2021 [5].

Existing guidelines have been discussed and updated and are finally adapted by the expert panel to correspond to the Belgian context.

The expert panel consisted of experts in various settings and representatives of the relevant professional Belgian societies involved in the management of oesophageal cancer.

These national guidelines will be regularly updated whenever new evidence emerges concerning clinical practice.

## EPIDEMIOLOGY

There are two main histological types of oesophageal cancer, oesophageal squamous cell carcinoma (SCC) and oesophageal adenocarcinoma (AC). The main risk factors for SCC in Western countries are smoking and alcohol consumption, whereas AC mainly occurs in patients with chronic gastro-oesophageal reflux disease and overweight. [6]

The Belgian Cancer Registry has registered 1.133 new cases of oesophageal cancer in Belgium in 2019. [7] Both histologies of oesophageal cancer are considered severe malignancies with poor prognosis in the great majority of all cases. [6]

Defining the treatment strategy for patients suffering from oesophageal cancer requires a discussion by a specialized multidisciplinary team including surgeons, medical oncologists, gastroenterological oncologists, radiation oncologists, radiologists, pathologists, supportive and palliative care specialists, nuclear medicine... [4]

## DIAGNOSIS

- Mass screening for oesophageal cancer is not recommended. (*Consensus*)
- Upper intestinal endoscopy with biopsies should be performed for all patients with:
  - New dysphagia
  - Gastrointestinal bleeding
  - Recurrent aspiration or emesis
  - Weight loss and/or loss of appetite. (*ESMO*)
- Patients with a family history of oesophageal cancer should only undergo endoscopic surveillance with biopsies in case of suspicious lesions. (*Consensus*)
- Patients with Barrett's oesophagus need a follow-up as defined in the guidelines for Barrett's oesophagus. (*Consensus*)
- Patients with a personal history of ENT cancer treated with curative intent should undergo endoscopic surveillance with (virtual) chromoendoscopy to screen for oesophageal squamous cell cancer. (*ESGE guideline on Quality in endoscopy*)
- The differentiation between SCC and AC is of prognostic and clinical relevance. (*Consensus*)
- Esophagogastroduodenoscopy with biopsies should be performed in all patients. (*ESMO, NCCN, KCE*)

- The sequence of molecular tests to be carried out:  
<https://www.compermed.be/activites/workflows#/cancer/35>
  - There is emerging evidence of the potential relevance for PDL-CPS testing in squamous cell carcinoma and for PDL-CPS and MSI testing in metastatic adenocarcinoma as predictive markers (*Consensus*)
  - Testing of HER-2 biomarker is recommended for adenocarcinoma in the metastatic or recurrent setting. (*NCCN*)

## STAGING

### PET-CT and CT scan

A high-quality CT scan of thorax/abdomen should be performed for complete staging and evaluation of the therapeutic strategy. CT scan of the neck should be done for upper oesophagus cancer only. (*ESMO, NCCN, KCE*).

In candidates for curative surgical resection (*other than endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD)*), PET-CT scan is obligatory to define N-staging and M-staging.. If this PET-CT scan is performed with oral and IV contrast in an appropriate dose and with an appropriate reconstruction method, the classic CT scan thorax/abdomen/neck could be omitted. (*ESMO, NCCN, KCE*)

Endoscopic resection in an endoscopic expert centre should be proposed

in superficial lesions to define the T-stage. (*Consensus*)

Restaging by PET-CT scan is necessary after neoadjuvant therapy, and after resection, in case the initial PET scan showed a FDG-avid lesion. A FDG-PET/CT scan is not required in pT1a after EMR or ESD, as the additional value of PET-CT scan in T1 tumours is minimal. (*Consensus*)

In case treatment with radiotherapy is decided, it is recommended to perform restaging with FDG-PET/CT scan after 4 to 6 weeks to allow settling of the inflammation. (*Consensus*)

### Ultrasound imaging

The endoscopic ultrasound (EUS) role for T-staging is controversial and not routinely recommended. In case of early lesions and endoscopic suspicion of submucosal invasion, EUS can be performed for N-staging mainly. The ultimate staging of early oesophageal cancer is obtained by an endoscopic resection. For SCC, ESD is recommended, while for AC, either EMR or ESD could be used depending on the endoscopic appearance of the lesion and suspicion of potential submucosal invasion. EUS should not be performed in bulky lesions for T-staging. (*Consensus*)

EUS for N-staging should be performed to define involved lymph nodes if the results could influence radiation fields' lineation or decisions on surgery or endoscopic resection. In those cases, fine needle aspiration

(FNA) is mandatory if suspicious nodes are detected. *(Consensus)*

For restaging, EUS is only necessary if treatment could be affected by the results. In those cases, FNA is mandatory. *(Consensus)*

Cervical ultrasound should be performed for staging purposes in case of suspicious lymph nodes on CT scan or PET-CT scan and if these results imply a treatment change. FNA is mandatory in those cases to prove lymph node involvement. *(Consensus)*

## Endoscopy

Tracheo-bronchoscopy should be done in all patients diagnosed with SCC to exclude trachea invasion or detect synchronous tumours. *(Consensus)*

After neoadjuvant treatment, the persistence of viable tumours is essential, and a control endoscopy is recommended. This endoscopy needs to be performed after the PET-CT scan to avoid false-positive PET lesions. *(Consensus)*

After neoadjuvant treatment, if a "wait and see" policy is prescribed, endoscopy with biopsy is required. The "wait and see" policy should only be used in case of complete response on a PET-CT scan and a negative endoscopy *(within the boundaries of a clinical trial)*. *(Consensus)*

Laparoscopy can be considered for AC in suspicion of peritoneal

metastases in locally advanced stage (T3/T4) of the distal oesophagus or gastroesophageal junction. However, this should be upfront discussed and decided on a case by case basis during a MDT meeting. *(Consensus)*

Laparoscopy for SCC should not be performed on a routine basis. *(Consensus)*

## GENERAL TREATMENT ASSESSMENT

- A MDT meeting is mandatory for treatment planning in all oesophageal cancer patients, including metastatic ones. *(Consensus)*
- During a MDT meeting, the following items should be discussed and evaluated:
  - The extent of disease and resectability
  - Operability of the patient: cardiac and pulmonary function of the patient should be tested at least once *(during re-assessment after neoadjuvant treatment, the clinical judgment could be used to define the need for re-testing cardiac and/or pulmonary function)*. *(Consensus)*
  - The nutritional status and history of weight loss according to the ESPEN guidelines (<https://www.espen.org/guidelines-home/espen-guidelines>). Physical, nutritional and mental support should be offered when deemed necessary.
  - Oncogeriatric evaluation, when necessary. *(Consensus)*

- All available medical relevant information should be reviewed and discussed. (*Consensus*)
- Oesophageal surgeries have to be performed in nominated reference centres. (*KCE*)
- All fit patients are encouraged to be included in prospective clinical trials. (*Consensus*)

## LOCALIZED RESECTABLE OESOPHAGEAL CANCER

Endoscopic mucosal resection (EMR) and endoscopic submucosal dissection (ESD) are recommended for all **T1a** cancers without lymphovascular invasion and without poor differentiation grade. ESD is the preferred method for SCC if en-bloc resection with Cap-EMR is impossible (>15 mm). EMR is the preferred option for AC, unless there is a high suspicion of submucosal invasion (depressed lesions, larger lesions). (*ESMO, ESGE*)

In patients with curative endoscopic resection of AC in the context of Barrett's oesophagus, subsequent ablation by radiofrequency ablation (RFA) of residual Barrett's mucosa is recommended. (*Consensus*)

All patients with **T1b**, **T2N0** or **T1a** endoscopic treatment failure, in good condition, should proceed to surgery. Endoscopic treatment for  $\geq$  **T1b**, **G3**

or **L+V+** lesions should only take place within the boundaries of a clinical trial. (*Consensus*)

Patients diagnosed with SCC, who are unfit or unwilling to undergo surgery, should be advised to be treated with chemoradiotherapy alone. (*ESMO, NCCN*)

Upfront surgery is not recommended for patients with cancer above **T2N0** if neoadjuvant treatment is deemed possible. (*NCCN*)

## LOCALLY ADVANCED OESOPHAGEAL CANCER

Surgery alone is not a standard treatment in locally advanced resectable disease. In all patients with **T3**, **T4a** or **N+** tumours, neoadjuvant therapy is indicated (chemotherapy or chemoradiotherapy). Treatment should be evaluated and decided on a case by case discussion during a MDT meeting. (*ESMO, NCCN*)

### Neoadjuvant therapy in squamous cell carcinoma

For all patients diagnosed with SCC, chemoradiotherapy is recommended. Based on the chemoradiotherapy results *for Oesophageal Cancer Followed by Surgery Study* (CROSS), weekly carboplatin and

paclitaxel administration for four-five weeks and concurrent radiotherapy followed by surgery is recommended. *(Consensus)*

Patients with non-resectable SCC or patients unfit or unwilling to undergo surgery should be offered definitive chemoradiotherapy. *(Consensus)*

Definitive chemoradiotherapy is recommended to all patients with cervically localized tumours *(to avoid pharyngo-laryngectomy)*. *(Consensus)*

### Neoadjuvant therapy in adenocarcinoma

For all patients diagnosed with AC of the oesophagus neoadjuvant radiochemotherapy or chemotherapy should be discussed during a MTD. One randomized trial compared these two modalities with no differences in OS but a clear benefit in for R0 resection and pathological complete response for the radiochemotherapy. *(Consensus)*

Patients with non-resectable AC or patients unfit or unwilling to undergo surgery should be offered definitive chemoradiotherapy or chemotherapy as monotherapy. *(ESMO, KCE)*

### Surgery

Surgery after neoadjuvant treatment is recommended as the standard of care for all patients with locally advanced oesophageal cancer, when

deemed resectable and whenever functional status makes it possible, even when a clinically complete response is suspected. Target is complete resection (R0), transthoracic and total of two field lymphadenectomy and three fields lymphadenectomy when deemed necessary. *(ESMO, NCCN)* For oesophageal carcinoma at or above the carina level, transthoracic esophagectomy with three-field lymph node dissection is preferably recommended. *(NCCN)* After resection, different lymph node stations should be put in other recipients for easy and precise pathological examination. *(Consensus)*

Minimally invasive oesophagectomy *(at least laparoscopy for gastrolysis)* is recommended where feasible. *(Consensus)*

Salvage oesophagectomy should be considered in case of local recurrence. *(Consensus)*

Adjuvant chemotherapy, as a standard of care, is not routinely recommended for patients having received neoadjuvant radiochemotherapy. Adjuvant platinum-based chemotherapy is recommended as part of perioperative chemotherapy for oesophageal and gastro-oesophageal junction adenocarcinoma and should be discussed for patients treated with surgery only. Still, it should be evaluated and decided on a case by case discussion during a MDT

meeting or within the boundaries of a clinical trial in case of residual positive nodes. *(Consensus)*

Adjuvant Nivolumab for one year after neoadjuvant chemoradiotherapy and surgery improves the disease-free survival and is currently recommended if no pCR for SCC and AC. *(NCCN)*

## METASTATIC OESOPHAGEAL CANCER

Chemotherapy with or without radiotherapy, stenting (with metal stents), brachytherapy, laser or Argon Plasma Coagulation (APC) as treatment should be discussed during a MDT meeting and with the patient. *(KCE)*

Palliative care should focus on comfort, nutrition and quality of life. *(Consensus)*

The patient's condition, comorbidity, organ function, performance status and expectations should be considered. The option for surgery in oligometastatic patients should be discussed on a case by case discussion during a MDT meeting, if possible, within the boundaries of clinical trials. *(Consensus)*

Targeted therapy and immunotherapy are currently evolving. However, the treatment of metastatic fit patients only occurs within the clinical

trials setting, except for Nivolumab with chemotherapy in first line AC PDLA-CPS $\geq$ 5 or pembrolizumab with chemotherapy in first line for AC PDL1-CPS $\geq$ 10. Patients with HER2-positive metastatic adenocarcinoma should be treated with trastuzumab-containing therapy. Different systemic options as 5-FU (SCC and AC), paclitaxel (SCC and AC), irinotecan (AC), oxaliplatin (SCC and AC), and ramucirumab (AC) are available and can be used in combination and sequential regimens. *(ESMO)*

The evidence for PDL1-CPS testing in squamous cell carcinoma and for PDL1-CPS and MSI testing in metastatic adenocarcinoma as predictive markers for the use of checkpoint inhibitors (nivolumab and pembrolizumab) is emerging. *(Consensus)*

## SUPPORTIVE TREATMENT

A three-step pain drug administration (WHO analgesic ladder) approach should be followed in patients with pain associated with oesophageal cancer. *(Consensus)*

Patients with oesophageal cancer should be offered specific psychological support from professionals belonging to the multidisciplinary team. *(Consensus)*

## FOLLOW-UP

Follow-up should concentrate on symptom assessment, history, physical examination, nutrition and psychosocial support. *(ESMO)*

For the first two years, CT abdomen/thorax should be checked every 3-6 months. Afterwards, every 6-12 months for the next three years and from then onwards annually. *(NCCN, KCE)*

## ROLE OF GENERAL PRACTITIONER

### Screening and referrals

- No mass screening is indicated for the general population. *(Consensus)*
- All patients with a potential or known diagnosis of oesophageal cancer should have access to a multidisciplinary oesophageal reference cancer team for information and support at every stage of diagnosis, treatment and follow-up. *(Consensus)*
- The general practitioner (GP) should be aware that investigations in primary care are associated with later referrals to a specialist, as communicating the results and organizing the referral may require additional consultations. *(Consensus)*

### Communicating the diagnosis

- The GP shall be promptly informed about oesophageal cancer

diagnosis if this has been communicated to the patient. Subsequent alterations in prognosis, management or drug treatment should also be communicated promptly and clearly, preferably in written form. *(Consensus)*

### Follow-up

- The GP shall ensure that the multidisciplinary oesophageal cancer team offers the patient follow-up. This is necessary for the detection of early recurrence and complications and the appropriate treatment. The GP shall motivate the patient to have a regular follow-up with the specialist. *(Consensus)*

## TNM classification [8]

### Cancer staging categories for cancer of the esophagus and esophagogastric junction

Category	Criteria
T category	
TX	Tumor cannot be assessed
T0	No evidence of primary tumor
Tis	High-grade dysplasia, defined as malignant cells confined by the basement membrane
T1	Tumor invades the lamina propria, muscularis mucosae, or submucosa
T1a*	Tumor invades the lamina propria or muscularis mucosae
T1b*	Tumor invades the submucosa
T2	Tumor invades the muscularis propria
T3	Tumor invades adventitia
T4	Tumor invades adjacent structures
T4a*	Tumor invades the pleura, pericardium, azygos vein, diaphragm, or peritoneum
T4b*	Tumor invades other adjacent structures, such as aorta, vertebral body, or trachea

### N category

NX	Regional lymph nodes cannot be assessed
N0	No regional lymph node metastasis
N1	Metastasis in 1–2 regional lymph nodes
N2	Metastasis in 3–6 regional lymph nodes
N3	Metastasis in 7 or more regional lymph nodes

### M category

M0	No distant metastasis
M1	Distant metastasis

## Adenocarcinoma G Category

GX	Differentiation cannot be assessed
G1	Well differentiated. >95% of tumor is composed of well-formed glands
G2	Moderately differentiated. 50% to 95% of tumor shows gland formation
G3 <sup>†</sup>	Poorly differentiated. Tumors composed of nest and sheets of cells with <50% of tumor demonstrating glandular formation

## Squamous cell carcinoma G category

GX	Differentiation cannot be assessed
G1	Well-differentiated. Prominent keratinization with pearl formation and a minor component of nonkeratinizing basal-like cells. Tumor cells are arranged in sheets, and mitotic counts are low
G2	Moderately differentiated. Variable histologic features, ranging from parakeratotic to poorly keratinizing lesions. Generally, pearl formation is absent
G3 <sup>†</sup>	Poorly differentiated. Consists predominantly of basal-like cells forming large and small nests with frequent central necrosis. The nests consist of sheets or pavement-like arrangements of tumor cells, and occasionally are punctuated by small numbers of parakeratotic or keratinizing cells

## Squamous cell carcinoma L category\*\*\*

LX	Location unknown
Upper	Cervical esophagus to lower border of azygos vein
Middle	Lower border of azygos vein to lower border of inferior pulmonary vein
Lower	Lower border of inferior pulmonary vein to stomach, including esophagogastric junction

\*, subcategories; †, if further testing of “undifferentiated” cancers reveals a glandular component, categorize as adenocarcinoma G3; ‡, if further testing of “undifferentiated” cancers reveals a squamous cell component, or if after further testing they remain undifferentiated, categorize as squamous cell carcinoma G3; \*\*\*, location is defined by epicenter of esophageal tumor.

**STAGING GROUPS – For Squamous cell carcinoma [8]**

Clinical Staging (cTNM)				Pathological (pTNM)						Postneoadjuvant Therapy (ypTNM)			
	cT	cN	M		pT	pN	M	G	Location		ypT	ypN	M
Stage 0	Tis	N0	M0	Stage 0	Tis	N0	M0	N/A	Any	Stage I	T0-2	N0	M0
Stage I	T1	N0-1	M0	Stage IA	T1a	N0	M0	G1	Any	Stage II	T3	N0	M0
Stage II	T2	N0-1	M0		T1a	N0	M0	GX	Any	Stage IIIA	T0-2	N1	M0
	T3	N0	M0	Stage IB	T1a	N0	M0	G2-3	Any	Stage IIIB	T3	N1	M0
Stage III	T3	N1	M0		T1b	N0	M0	G1-3	Any		T0-3	N2	M0
	T1-3	N2	M0		T1b	N0	M0	GX	Any		T4a	N0	M0
Stage IVA	T4	N0-2	M0		T2	N0	M0	G1	Any	Stage IVA	T4a	N1-2	M0
	Any T	N3	M0	Stage IIA	T2	N0	M0	G2-3	Any		T4a	NX	M0
Stage IVB	Any T	Any N	M1		T2	N0	M0	GX	Any		T4b	N0-2	M0
					T3	N0	M0	G1-3	Lower	Stage IVB	Any T	N3	M0
					T3	N0	M0	G1	Upper/middle		Any T	Any N	M1
				Stage IIB	T3	N0	M0	G2-3	Upper/middle				
					T3	N0	M0	GX	Lower/upper/middle				
					T3	N0	M0	Any	Location X				
					T1	N1	M0	Any	Any				
				Stage IIIA	T1	N2	M0	Any	Any				
					T2	N1	M0	Any	Any				
				Stage IIIB	T2	N2	M0	Any	Any				
					T3	N1-2	M0	Any	Any				
					T4a	N0-1	M0	Any	Any				
				Stage IVA	T4a	N2	M0	Any	Any				
					T4b	N0-2	M0	Any	Any				
					Any T	N3	M0	Any	Any				
				Stage IVB	Any T	Any N	M1	Any	Any				

STAGING GROUPS – For Adenocarcinoma [8]

Clinical Staging (cTNM)

	cT	cN	M
Stage 0	Tis	N0	M0
Stage I	T1	N0	M0
Stage IIA	T1	N1	M0
Stage IIB	T2	N0	M0
Stage III	T2	N1	M0
	T3	N0-1	M0
	T4a	N0-1	M0
Stage IVA	T1-4a	N2	M0
	T4b	N0-2	M0
	Any T	N3	M0
Stage IVB	Any T	Any N	M1

Pathological (pTNM)

	pT	pN	M	G
Stage 0	Tis	N0	M0	N/A
Stage IA	T1a	N0	M0	G1
	T1a	N0	M0	GX
Stage IB	T1a	N0	M0	G2
	T1b	N0	M0	G1-2
	T1b	N0	M0	GX
Stage IC	T1	N0	M0	G3
	T2	N0	M0	G1-2
Stage IIA	T2	N0	M0	G3
	T2	N0	M0	GX
Stage IIB	T1	N1	M0	Any
	T3	N0	M0	Any
Stage IIIA	T1	N2	M0	Any
	T2	N1	M0	Any
Stage IIIB	T2	N2	M0	Any
	T3	N1-2	M0	Any
	T4a	N0-1	M0	Any
Stage IVA	T4a	N2	M0	Any
	T4b	N0-2	M0	Any
	Any T	N3	M0	Any
Stage IVB	Any T	Any N	M1	Any

Postneoadjuvant Therapy (ypTNM)

	ypT	ypN	M
Stage I	T0-2	N0	M0
Stage II	T3	N0	M0
Stage IIIA	T0-2	N1	M0
Stage IIIB	T3	N1	M0
	T0-3	N2	M0
	T4a	N0	M0
Stage IVA	T4a	N1-2	M0
	T4a	NX	M0
	T4b	N0-2	M0
	Any T	N3	M0
Stage IVB	Any T	Any N	M1

## ABBREVIATIONS

AC	Adenocarcinoma
EMR	Endoscopic mucosal resection
ESD	Endoscopic submucosal dissection
GP	General Practitioner
IV	Intravenous
MDT	Multidisciplinary Tumour Board
RFA	Radiofrequent ablation
SCC	Squamous cell carcinoma

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