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# Cancer of the upper aerodigestive tract: assessment and management in people aged 16 and over

## NICE guideline: short version

Draft for consultation, September 2015

**[this box is for consultation drafts only, at publication this information will go on the guideline overview page]**

**This guideline covers** This guideline covers the assessment and management of cancers of the upper aerodigestive tract in young people (16 years and older) and adults. It aims to reduce variation in practice and improve survival.

### Who is it for?

- People with cancer of the upper aerodigestive tract, their families and carers.
- Healthcare professionals working in secondary and tertiary care

This version of the guideline contains the recommendations, context and recommendations for research. The Guideline Committee's discussion and the evidence reviews are in the [full guideline](#).

Other information about how the guideline was developed is on the [project page](#) **[Link to the consultation documents page]**. This includes the scope, and details of the Committee and any declarations of interest.

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## 1 **Recommendations**

People have the right to be involved in discussions and make informed decisions about their care, as described in [Your care](#).

[Using NICE guidelines to make decisions](#) explains how we use words to show the strength of our recommendations, and has information about safeguarding, consent and prescribing medicines (including 'off-label' use).

2

### 3 **1.1 Information and support**

#### 4 **Information needs**

5 1.1.1 For people with cancer of the upper aerodigestive tract and their  
6 carers:

- 7 • offer consistent information and support at diagnosis
- 8 • review their needs throughout the care pathway including at the  
9 end of treatment
- 10 • tailor information and support to the person's needs (including  
11 the benefits and side effects of treatment, psychosocial and  
12 long-term functional issues).

13 1.1.2 Give people contact details for their allocated key worker, in line  
14 with the NICE service guidance on [improving outcomes in head  
15 and neck cancer](#) and recommendations of the [National Peer  
16 Review Programme](#).

17 1.1.3 Give people details of peer support services that can help them  
18 throughout their care pathway.

19 1.1.4 Offer information about human papillomavirus (HPV) to people with  
20 HPV-related cancer of the upper aerodigestive tract.

1 **Smoking cessation**

- 2 1.1.5 Inform patients and carers at the point of diagnosis about how  
3 continuing to smoke adversely affects outcomes such as:
- 4 • treatment-related side effects
  - 5 • risk of recurrence
  - 6 • risk of second primary cancers.
- 7 1.1.6 Offer help to people to stop smoking, in line with the NICE guideline  
8 on [smoking cessation services](#).

9 **1.2 Investigation**

10 **Assessment of neck lumps**

- 11 1.2.1 Offer fine-needle aspiration cytology to people with a neck lump  
12 that is suspected of being cancer of the upper aerodigestive tract.
- 13 1.2.2 Consider ultrasound-guided fine-needle aspiration cytology or  
14 ultrasound-guided core biopsy for people with a neck lump that is  
15 suspected of being cancer of the upper aerodigestive tract.
- 16 1.2.3 Consider having a cytopathologist or biomedical scientist assess  
17 the cytology sample adequacy when the procedure is carried out.

18 **Identifying the occult primary**

- 19 1.2.4 Offer a fluorodeoxyglucose positron emission tomography (FDG  
20 PET)-CT scan as the first investigation to detect the primary site in  
21 people with metastatic nodal squamous cell carcinoma of unknown  
22 origin that is thought to arise from the upper aerodigestive tract.
- 23 1.2.5 Consider using narrow-band imaging endoscopy to identify a  
24 possible primary site when it has not been possible to do so using  
25 FDG PET-CT.
- 26 1.2.6 Offer a biopsy to confirm a possible primary site.

1 1.2.7 Offer surgical diagnostic assessment if FDG PET-CT does not  
2 identify a possible primary site. This may include:

- 3 • guided biopsies
- 4 • tonsillectomy
- 5 • tongue base mucosectomy.

6 1.2.8 Consider an MRI or CT scan before diagnostic surgery to help with  
7 radiotherapy treatment planning.

### 8 **Systemic staging – who and how?**

9 1.2.9 Do not offer systemic staging to people with T1N0 or T2N0 cancer  
10 of the upper aerodigestive tract.

11 1.2.10 Offer systemic staging to people with T3, T4 or N+ cancer of the  
12 upper aerodigestive tract.

13 1.2.11 Offer conventional imaging to people with cancer of the upper  
14 aerodigestive tract that is:

- 15 • T1N1-2 (all sites)
- 16 • T2N1-2 (all sites)
- 17 • T3N1-2 (all sites)
- 18 • T4N1-2 (all sites except the nasopharynx and hypopharynx).

19 1.2.12 Offer FDG PET-CT to people with T4 cancer of the hypopharynx or  
20 nasopharynx.

21 1.2.13 Offer FDG PET-CT to people with N3 cancer of the upper  
22 aerodigestive tract.

## 23 **1.3 Treatment of early stage disease**

### 24 **Squamous cell carcinoma of the larynx**

25 1.3.1 Offer transoral laser microsurgery to people with newly-diagnosed  
26 T1a squamous cell carcinoma of the glottic larynx.

1 1.3.2 Offer a choice of transoral laser microsurgery or radiotherapy to  
2 people with newly-diagnosed T1b–T2 squamous cell carcinoma of  
3 the glottic larynx.

4 1.3.3 Offer a choice of transoral surgery or radiotherapy to people with  
5 newly-diagnosed T1–T2 squamous cell carcinoma of the  
6 supraglottic larynx.

### 7 **Management of the N0 neck in T1–2 squamous cell carcinoma of the oral** 8 **cavity**

9 1.3.4 Offer surgical management of the neck to all people with early oral  
10 cavity cancer (T1–T2, N0).

11 1.3.5 Offer sentinel lymph node biopsy instead of elective neck  
12 dissection to people with early oral cavity cancer (T1–T2, N0),  
13 unless they need cervical access at the same time (for example,  
14 free-flap reconstruction).

### 15 **Squamous cell carcinoma of the oropharynx (T1–2, N0)**

16 1.3.6 Offer people the choice of transoral surgical resection or primary  
17 radiotherapy for T1–2 N0 tumours of the oropharynx.

18 1.3.7 Consider postoperative radiotherapy, with or without concomitant  
19 chemotherapy, for T1–2 N0 tumours of the oropharynx if  
20 pathologically adverse risk factors have been identified.

## 21 **1.4 *Treatment of advanced disease***

### 22 **Squamous cell carcinoma of the larynx**

23 1.4.1 Offer people with T3 squamous cell carcinoma of the larynx a  
24 choice of:

- 25 • radiotherapy with concomitant chemotherapy, or
- 26 • surgery with adjuvant radiotherapy, with or without concomitant
- 27 chemotherapy.

1 1.4.2 Discuss the following with people with T3 squamous cell carcinoma  
2 of the larynx and their carers, to inform their choice of treatment:

- 3 • the potential advantages of laryngeal preservation
- 4 • the risk of needing salvage laryngectomy (and its associated  
5 complications)
- 6 • the benefits of primary surgery in people with existing  
7 compromised swallowing and airway function
- 8 • likely voice and swallowing function after treatment (including the  
9 need for a long-term feeding tube).

10 1.4.3 For people with T4a squamous cell carcinoma of the larynx  
11 consider surgery with adjuvant radiotherapy, with or without  
12 concomitant chemotherapy.

### 13 **Squamous cell carcinoma of the hypopharynx**

14 1.4.4 Offer larynx-preserving treatment to people with locally advanced  
15 squamous cell carcinoma of the hypopharynx if radiation and neo-  
16 adjuvant and/or concomitant chemotherapy would be suitable for  
17 them and they do not have:

- 18 • tumour-related dysphagia needing a feeding tube
- 19 • a compromised airway
- 20 • recurrent aspiration pneumonias.

21 1.4.5 Offer radiotherapy with neo-adjuvant and/or concomitant  
22 chemotherapy if larynx-preserving treatment is suitable for the  
23 person.

24 1.4.6 Offer primary surgery followed by adjuvant radiotherapy to people if  
25 chemotherapy is not a suitable treatment for them.

26 1.4.7 Offer adjuvant radiotherapy to people having surgery as their  
27 primary treatment. Add concomitant chemotherapy if appropriate.

1 **Palliation of breathing difficulties**

2 1.4.8 Identify people at risk of airways obstruction for whom intervention  
3 is appropriate. Think about:

- 4
- their performance status
  - treatment side effects and length of hospital stay
  - involving the palliative care team and other specialists when  
7 appropriate.

8 1.4.9 Consider endoluminal debulking in preference to tracheostomy.

9 1.4.10 Establish a management plan if surgical intervention is not  
10 appropriate, in conjunction with the person, carers and clinical staff.

11 1.4.11 Assess and treat other causes of breathlessness in people with  
12 incurable upper aerodigestive tract cancer.

13 **1.5 HPV-related disease**

14 **HPV testing**

15 1.5.1 Test all squamous cell carcinomas of the oropharynx using p16  
16 immunohistochemistry. Regard the p16 test result as positive only if  
17 there is strong nuclear and cytoplasmic staining in more than 70%  
18 of tumour cells.

19 1.5.2 Consider high-risk HPV DNA or RNA in-situ hybridisation in all p16-  
20 positive cancers of the oropharynx to confirm HPV status.

21 **De-intensification of treatment**

22 1.5.3 Do not offer de-intensification of curative treatment to people with  
23 HPV-positive cancer of the oropharynx, unless it is part of a clinical  
24 trial.



1 **1.6** ***Less common upper aerodigestive tract cancers***

2 **Carcinoma of the nasopharynx**

3 1.6.1 Offer intensity-modulated radiation therapy with concomitant  
4 chemotherapy to people with locally advanced (stage II and above)  
5 nasopharyngeal cancer.

6 1.6.2 Consider adjuvant or neo-adjuvant chemotherapy for people with  
7 locally advanced (stage II and above) nasopharyngeal cancer.

8 **Carcinoma of the paranasal sinuses**

9 1.6.3 Offer surgery as the first treatment for carcinoma of the paranasal  
10 sinuses if complete resection is possible.

11 1.6.4 Consider radiotherapy with or without concomitant chemotherapy  
12 before planned surgical resection of the paranasal sinuses if  
13 complete resection is not initially possible.

14 **Unknown primary of presumed upper aerodigestive tract origin**

15 1.6.5 Offer people with squamous cell carcinoma in the cervical lymph  
16 nodes with an unknown primary the choice of:

- 17
- 18 • neck dissection and adjuvant radiation with or without  
19 chemotherapy, or
  - 20 • primary radiation with or without chemotherapy, with surgery for  
21 persistent disease.

21 1.6.6 Consider no further treatment as an option in people with pN1  
22 disease without extracapsular spread after neck dissection.

23 1.6.7 Consider including potential primary tumour sites when selecting  
24 the volume to be treated with radiotherapy.

1 **Mucosal melanoma**

2 1.6.8 Consider surgery and adjuvant radiotherapy for people with newly-  
3 diagnosed upper aerodigestive tract mucosal melanoma without  
4 systemic metastases.

5 **1.7 Optimising rehabilitation and function**

6 **Enteral nutrition support**

7 1.7.1 Assess people's need for enteral nutrition at diagnosis, including  
8 prophylactic tube placement. The multidisciplinary team should  
9 take into account:

- 10 • performance status and social factors
- 11 • nutritional status (weight loss, high or low BMI, ability to meet  
12 estimated nutritional needs)
- 13 • tumour stage
- 14 • tumour site
- 15 • pre-existing dysphagia
- 16 • impact of planned treatment (such as radiation treatment volume  
17 and dose-fractionation, concomitant chemotherapy, and extent  
18 and site of surgery).

19 1.7.2 Follow the recommendations in NICE's guideline on [nutrition](#)  
20 [support in adults](#) for people aged 18 years and over.

21 **Speech and language therapy interventions**

22 1.7.3 Consider swallowing-exercise programmes for people having  
23 radiotherapy.

24 1.7.4 Consider mouth-opening exercises for people having radiotherapy  
25 who are at risk of reduced mouth opening.

26 1.7.5 Consider voice therapy for people whose voice has changed  
27 because of their treatment.

1 **Shoulder rehabilitation**

2 1.7.6 Consider progressive resistance training for people with impaired  
3 shoulder function, as soon as possible after neck dissection.

4 **1.8 Follow-up of people with cancer of the upper**  
5 **aerodigestive tract and management of**  
6 **osteoradionecrosis**

7 **Follow-up**

8 1.8.1 Ensure people with cancer of the upper aerodigestive tract and  
9 their carers have tailored information about the symptoms of  
10 recurrence and late effects of treatment at the end of curative  
11 therapy.

12 1.8.2 Consider structured, risk-adapted follow-up using locally-agreed  
13 protocols for people who have had curative treatment for cancer of  
14 the upper aerodigestive tract. Use the follow-up protocols to:

- 15 • help improve quality of life, including discussing psychosocial  
16 issues  
17 • detect disease recurrence or second primary cancer, possibly  
18 including narrow-band imaging to improve detection.

19 **Management of osteoradionecrosis**

20 1.8.3 Consider surgery to remove necrotic bone and to establish soft  
21 tissue coverage in people with osteoradionecrosis.

22 1.8.4 Only consider hyperbaric oxygen therapy or medical management  
23 for treating osteoradionecrosis as part of a clinical trial.

24 ***Stages of upper aerodigestive tract cancer***

25 The stages of upper aerodigestive tract cancer referred to in this guideline are  
26 listed below.

- 1 • T0: this means there is no primary tumour, but there may be abnormal cells  
2 that are precancerous.
- 3 • T1 to T4: this refers to the increasing size and/or extent of the primary  
4 tumour, with 1 being smallest and 4 largest.
- 5 • N0: no lymph nodes contain cancer cells.
- 6 • N1 and upwards: increasing involvement of lymph nodes by cancer cells.

## 7 **Implementation: getting started**

8 This section will be completed in the final guideline using information provided  
9 by stakeholders during consultation.

10 To help us complete this section, please use the [stakeholder comments form](#)  
11 **[update hyperlink with guidance number]** to give us your views on these  
12 questions:

- 13 1. Which areas will have the biggest impact on practice and be challenging to  
14 implement? Please say for whom and why.
- 15 2. What would help users overcome any challenges? (For example, existing  
16 practical resources or national initiatives, or examples of good practice.)

## 17 **Context**

18 Upper aerodigestive tract cancers are found at various sites in the airways of  
19 the head and neck: the oral cavity, oropharynx, nasopharynx, hypopharynx,  
20 larynx and nasal sinuses. The majority are squamous cell cancers. The major  
21 risk factors for upper aerodigestive tract squamous cell cancer in the UK are  
22 tobacco smoking and alcohol consumption.

23 There is currently variation or uncertainty in the investigations used to assess  
24 neck lumps; who needs systemic staging; the most effective treatment for  
25 early stage and advanced disease; how to best identify HPV-positive disease;  
26 how to optimise function and rehabilitation; the most effective follow-up and  
27 the management of osteoradionecrosis of the jaw. This guideline aims to  
28 make recommendations that address these areas of variation/uncertainty.

1 This guideline will cover adults and young people (16 years and older):

- 2 • Referred from primary care with suspected cancer of the upper  
3 aerodigestive tract  
4 • With newly diagnosed or recurrent cancer of the upper aerodigestive tract

5 It will not cover:

- 6 • Adults and young people with cancers of the thyroid, orbit, middle ear,  
7 cutaneous lip, skull base or salivary gland  
8 • Adults and young people with sarcoma or lymphoma  
9 • Children under 16 years

## 10 **Recommendations for research**

11 The Guideline Committee has made the following recommendations for  
12 research. The Guideline Committee's full set of research recommendations is  
13 detailed in the [full guideline](#). [hyperlink to be added for final publication]

### 14 ***1 Systemic imaging – who and why?***

15 A prospective study should be undertaken to identify what factors determine  
16 the risk of a person presenting with CUADT having metastasis or a second  
17 primary cancer. Outcomes of interest include prevalence, predictive value and  
18 how the abnormalities identified influence patient management.

### 19 **Why this is important**

20 The presence of metastasis and a synchronous second primary cancer at  
21 presentation is rare in patients with CUADT. Subgroups of patients have been  
22 identified in whom the risk is clearly elevated. However, it is not clear at which  
23 level of risk detailed staging investigations are justified and the impact the  
24 results of these would have on decision making by the clinicians and the  
25 patient. Health economic modelling is needed to inform this process.

1 **2 HPV testing**

2 A prospective study should be undertaken to compare the effectiveness of  
3 single-step laboratory diagnostic tests to identify human papillomavirus (HPV)  
4 against current diagnostic test algorithms and reference standards in people  
5 with cancer of the oropharynx. Outcomes of interest are sensitivity, specificity  
6 and resource use.

7 **Why this is important**

8 HPV testing is currently recommended in cancer of the oropharynx since it  
9 has significant prognostic implication. Current methods utilise a two-step  
10 procedure which is not widely available in all treatment centres. A single-step  
11 test is likely to be more widely adopted and could have significant budgetary  
12 implications for the NHS. The study should also consider the prognostic value  
13 and the economic benefits of novel tests.

14 **3 Unknown primary of presumed upper aerodigestive tract**  
15 **origin**

16 A prospective study should be undertaken in people with CUADT of unknown  
17 primary to identify whether radiotherapy target volumes can be selected  
18 based on clinical and pathological factors. Outcomes of interest include local  
19 control, progression-free survival, overall survival, and treatment-related  
20 morbidity and mortality.

21 **Why this is important**

22 In a very small percentage of patients with squamous carcinoma involving a  
23 cervical lymph-node the primary site remains occult despite intensive  
24 investigations. The optimum treatment of these patients is uncertain. Some  
25 clinical teams will treat the neck disease alone and others will treat some or all  
26 potential primary sites with the radiotherapy with or without chemotherapy.  
27 The latter strategy is associated with a high level of side-effects that may have  
28 lifelong consequences, for example xerostomia. A better understanding of the  
29 clinico-pathological factors associated with treatment outcomes would  
30 improve treatment selection with the potential to reduce these side effects.

1 **4 Enteral nutrition support**

2 A prospective study should be undertaken to identify the specific clinical and  
3 non-clinical factors that allow risk stratification when selecting which people  
4 with CUADT would benefit from short or long-term enteral nutrition. Outcomes  
5 of interest include resource use, morbidity of tube placement and duration of  
6 enteral feeding.

7 **Why this is important**

8 There are no nationally agreed selection criteria for the type of feeding tube  
9 placed at diagnosis for people that need enteral nutrition support during  
10 curative treatment. Variation across the UK exists as a result of clinician-led  
11 practices and local policy. The systematic review by NICE in 2015 found some  
12 evidence but no specific list was identified due to limitations with study design,  
13 and inability to stratify clinical and non-clinical factors meaningfully. These  
14 factors included restricted populations for tumour staging, patient  
15 demographics, treatment plan and intent, definitions of malnutrition, timing  
16 and method of tube placement, and duration of enteral nutrition.

17 **5 Follow-up**

18 A prospective study should be undertaken to investigate the optimal method,  
19 frequency and duration of follow-up for people who are disease free after  
20 treatment for CUADT. Outcomes of interest include quality of life, local control  
21 and overall survival.

22 **Why this is important**

23 What are the optimal methods, frequency, and duration of follow-up in people  
24 who are clinically disease free and who have undergone treatment for  
25 squamous cell cancer of the upper aerodigestive tract with curative intent?  
26 Considerable resources are expended throughout the country on the follow-up  
27 of people who have completed potentially curative treatment. Local follow-up  
28 protocols are based more on historical practice than evidence and are often  
29 disease- rather than patient-centred. Research to investigate how and when

## DRAFT FOR CONSULTATION

1 follow-up should optimally be carried out could improve clinical outcomes and  
2 the use of resources.

3

4 **ISBN**

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