

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Centre for Clinical Practice – Surveillance Programme

Surveillance review consultation document

10-year surveillance review of CSGHN: Improving outcomes in Head and Neck Cancer

Background information

Guideline issue date: November 2004

10 year review: 2015

Surveillance review recommendation

Surveillance review proposal for consultation:

The CSGHN: Improving outcomes in Head and Neck Cancer guideline should not be considered for an update at this time.

The guideline should be transferred to the static guidance list because it fulfils the following criteria:

- No evidence was identified that would impact on the current guidance and no quality standard has been commissioned

Main findings of the current 10 year surveillance review

An [Evidence Update](#) was produced for the guideline in 2012 and was used as a source of evidence for the 10 year surveillance review. The Evidence Update considered new evidence from 1st July 2010 to 12th December 2011. New evidence that may impact on the guideline recommendations was identified in nine areas of the Evidence Update. This was in relation to the following:

- Facial palsy may indicate a more advanced case of cancer than conventional staging
- FDG-PET may be useful for assessing distant metastases of the head and neck

- Auto-fluorescence endoscopy may have better sensitivity and specificity than white-light endoscopy for detecting laryngeal cancer or dysplasia
- Altered fractionated radiotherapy may be associated with better outcomes compared to conventional radiotherapy
- Open partial laryngectomy may be an effective organ sparing treatment alternative to total laryngectomy in those with early laryngeal carcinoma that recurs after radiotherapy
- CO₂ endolaryngeal laser excision may be more cost effective than standard fractionation radiotherapy for early stage glottic cancer
- Altered fractionated radiotherapy with concurrent chemotherapy may be associated with better outcomes compared to other treatment strategies
- Limited evidence exists for the use of hyperbaric oxygen for the prevention or treatment of osteoradionecrosis of the jaw after tooth extraction in those who have undergone radiotherapy for head and neck cancer
- Early discharge from follow-up may not be advisable for people with laryngeal dysplasia.

The literature included in the Evidence Update specifically focused on methods for diagnosis and treatment whereas CSGHN provides guidance on services for adult patients with cancers of the head and neck and is intended to inform commissioning and provision of cancer services by people from both clinical and non-clinical communities. As such, recommendations in the head and neck cancer service guidance focus on which healthcare professionals should be involved in treatment and care, and the types of hospital or cancer centre that are best suited to provide that healthcare rather than specific treatments. Furthermore, NICE is currently developing a clinical guideline on [Upper airways tract cancers: assessment and management of upper airways tract cancers](#) (including cancers of the oral cavity, oropharynx, nasopharynx, hypopharynx, larynx and nasal sinuses) which is likely to cover the majority of areas identified through the Evidence Update process. The anticipated publication date for this guideline is February 2016.

For this 10 year surveillance review, a focused literature search was conducted to identify new evidence published between 12th December 2011 (the end of the Evidence Update search period) and 21st January 2015 and relevant abstracts were assessed. The focus of the search was to identify studies evaluating the impact of surgeon and hospital volumes on quality of decision making and outcomes. Due to the nature of the potential evidence sought, the search strategy included observational studies in addition to randomised controlled trials (RCTs) and systematic reviews.

Clinical feedback on the head and neck cancer service guidance was obtained from five members of the GDG of the in-development upper aerodigestive tract mucosal cancers clinical guideline through a questionnaire.

Clinical feedback highlighted evidence and ongoing trials relating to different head and neck cancer treatments. All five GDG members thought that the guideline needed to be updated to reflect these new developments. NICE is currently developing a clinical guideline on assessment and management of upper airways tract cancers (including cancers of the oral cavity, oropharynx, nasopharynx, hypopharynx, larynx and nasal sinuses) which is likely to cover the majority of areas related to the evidence identified through the questionnaire. Clinical feedback also indicated that there was new evidence regarding the structure and working of head and neck teams, local support teams, neck lump clinic

organisation and the impact of the demise of the Network Site Specific Groups and centralisation. However, no references or study details were provided. Furthermore, it was also highlighted by a GDG member that there were new roles for PET CT. Again, no study details were provided.

New evidence was identified for the current 10 year surveillance review relating to the following areas within the head and neck cancer service guidance.

Clinical area: Referral		
Q: In head and neck cancer does earlier detection of malignancy lead to improved outcomes?		
Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p><u>Prognosis</u></p> <p>Presence of facial palsy</p> <p>A comparative survival analysis¹ was conducted of 21 case-series in 348 patients with squamous cell carcinomas of the temporal bone or auditory canal. Results showed that the presence of facial palsy, irrespective of the stage of cancer, was associated with significantly lower 5 year overall survival compared to no facial palsy. Furthermore, the Pittsburgh 2000 staging system showed a significant difference in 5 year overall survival between T3 and T4 but no significant difference in this outcome were found between T3 and T4 in Pittsburgh 1990 staging, or between T2 and T3 in Stell staging. In the Cox regression survival analysis those with facial palsy and any stage cancer had a survival similar to those with Pittsburgh 2000 T4 disease.</p> <p>The Evidence Update stated that no specific recommendations for temporal bone or auditory</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The Evidence Update found new evidence about the presence of facial palsy. However, CSGHN does not currently make any specific recommendations about temporal bone or auditory canal tumours.</p> <p>The evidence provided in the Evidence Update on the presence of facial palsy is unlikely to impact on this guidance. This is because CSGHN provides guidance on services for head and neck cancer patients and does not specifically focus on diagnosis and treatment options. Nonetheless, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p> <p>New evidence on the expression of carbonic anhydrase-9 was identified by the Evidence Update. However, it was concluded that this evidence was unlikely to affect guidance since it has no direct clinical application. The Evidence Update suggested that further research to assess the association in specific tumour sites and to determine if CA-9 expression has any use in predicting response to treatment was required.</p>

<p>canal tumours were included in CSGHN and this area may be a consideration in a future update of the guidance.</p> <p>Expression of carbonic anhydrase-9</p> <p>A meta-analysis² of 16 studies found that a significant proportion of head and neck tumours expressed CA-9. In addition, overall survival and disease free survival were found to be significantly higher in those who were CA-9 negative. Disease free survival was also significantly higher in people who expressed low levels of CA-9 compared to those expressing high levels.</p> <p>The Evidence Update concluded that this study is unlikely to affect guidance since it has no direct clinical application. It was suggested that further research is required to assess the association in specific tumour sites and to determine if CA-9 expression has any use in predicting response to treatment. CSGHN does not currently cover this topic.</p> <p>F-fluorodeoxyglucose (FDG) uptake in tumours</p> <p>A meta-analysis³ of eight studies (n=495) assessed if the uptake of FDG in tumours correlated with outcome. It was found that increased uptake of FDG was associated with lower rates of local control, disease free survival and overall survival.</p>		<p>The Evidence Update also identified new evidence regarding FDG uptake in tumours. The Evidence Update concluded that there was no evidence for changing treatment strategies for patients whose FDG uptake status was known. Furthermore, it was stated that there is no standardised method of measuring uptake. As such, it was suggested that this evidence was unlikely to impact on CSGHN.</p>
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<p>The Evidence Update concluded that there was no evidence for changing treatment strategies for patients whose FDG uptake status was known. Furthermore, it was stated that there is no standardised method of measuring uptake. As such, it was suggested that this evidence was unlikely to impact on CSGHN.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		
<p>Clinical area: Referral</p>		
<p>Q: In groups at a higher risk of developing head and neck cancers, do interventions aimed at raising awareness of the existence of head and neck cancers, the risk factors and the features of possible early disease, lead to improved outcomes?</p>		
<p>Evidence summary</p>	<p>GDG/clinical perspective</p>	<p>Impact</p>
<p><u>Evidence Update (2012)</u></p> <p>Lifestyle factors</p> <p>A study based on data from the International Head and Neck Cancer Epidemiology (INHANCE) Consortium reported on the dietary factors associated with head and neck cancer in 14,520 cases and 22,737 controls. Overall, higher vegetable intake and fruit intake were associated with lower head and neck cancer rates whilst higher intakes of processed meats were found to be associated with higher incidents of these cancers. A high intake of white meat was found to be associated with lower head and neck cancer rates.⁴</p> <p>Another study investigated recreational physical</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>New evidence was identified by the Evidence Update relating to lifestyle factors. The Evidence Update concluded that the evidence was unlikely to impact on the guidance since this type of evidence did not directly guide clinical practice. Furthermore, risk factors are not currently covered in CSGHN.</p> <p>The Evidence Update also found new evidence about MUC1 and MUC2 expression. However, it was concluded that further research in this area would be required before consideration for inclusion in the guideline. This topic is not currently covered in CSGHN.</p> <p>In addition, the Evidence Update identified new evidence about HPV detection. Nonetheless, the Evidence Update concluded that the study identified was unlikely to impact on future</p>

<p>activity in four studies (2289 cases, 5580 controls).⁵. Results showed that moderate physical activity was associated with reduced head and neck cancer rates when compared to no or low levels of physical activity. No association was found with high physical activity. Stratification by cancer type showed that moderate and high physical activity were associated with lower oral cancer and pharyngeal cancers. No definitive association was found between laryngeal cancer and moderate physical activity.</p> <p>The Evidence Update concluded that these studies were unlikely to impact on the guidance since this type of evidence does not directly guide clinical practice. Furthermore, risk factors are not currently covered in CSGHN.</p> <p>MUC1 and MUC2 expression</p> <p>A systematic review⁶ was identified which investigated the existence and potential roles of mucins in the normal larynx and laryngeal squamous cell carcinoma. In the studies which looked at MUC1 expression (5 studies with 161 carcinoma and 70 normal cell samples) the results were inconsistent. This was also the case in the two studies examining MUC2.</p> <p>The Evidence Update concluded that further research in this area may be useful. However, it was suggested that the results of this study alone were unlikely to impact on guidance. This topic is not currently covered in CSGHN.</p>		<p>guidance because the findings did not have direct clinical implications for the diagnosis or treatment of oral cancers. Furthermore, it was suggested that the results might not be generalisable to the UK since studies have shown geographical differences in the prevalence of HPV in people with oropharyngeal cancer.</p> <p>The Evidence Update also found new evidence on Epstein-Barr virus detection in nasopharyngeal cancer. The Evidence Update concluded that this study may not be generalisable to the UK since most of the included studies were conducted in Asian populations who are known to have higher incidences of nasopharyngeal cancer. Furthermore, it stated that this evidence alone was unlikely to affect any future update of this guidance.</p>
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<p>Human Papillomavirus (HPV) detection</p> <p>A systematic review⁷ was conducted to investigate the association between HPV in oral carcinoma and potentially malignant disorders (OPMD). It included 39 cross-sectional studies. Results showed significant associations between HPV-DNA detection and oral carcinoma and for HPV16 only. HPV was also found to be associated with OPMD. In the subgroup analysis of OPMD, HPV was found to be associated with oral leukoplakia, oral lichen planus and epithelial dysplasia.</p> <p>The Evidence Update concluded that CSGHN does not cover HPV other than stating that it is “implicated in the development of some cancers of the oral cavity, pharynx and larynx”. The Evidence Update stated that this study was unlikely to impact on future guidance because the findings do not have direct clinical implications for the diagnosis or treatment of oral cancers. Furthermore, it was suggested that the results might not be generalisable to the UK since studies have shown geographical differences in the prevalence of HPV in people with oropharyngeal cancer.</p> <p>Epstein-Barr virus detection in nasopharyngeal cancer</p> <p>A meta-analysis⁸ of 15 observational studies in 2393 people investigated the accuracy of detecting Epstein-Barr virus DNA as a marker for</p>		
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<p>nasopharyngeal cancer. The pooled sensitivity was found to be 89.1% and the pooled specificity 85%. Furthermore, plasma samples were found to have the highest sensitivity and specificity for this type of cancer compared to serum samples.</p> <p>The Evidence Update concluded that this study may not be generalisable to the UK since most of the included studies were conducted in Asian populations who are known to have higher incidences of nasopharyngeal cancer. Furthermore, it stated that this evidence alone was unlikely to affect any future update of this guidance.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		
Clinical area: Referral		
Q: Does opportunistic screening for head and neck cancers, including assessments of the salivary glands and neck nodes, result in improved outcomes for head and neck cancer patients?		
Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p>Population screening</p> <p>A Cochrane review⁹ investigated RCTs of screening for oral cancer. One cluster randomised study was included (n=191,873). This showed no significant difference in oral cancer mortality rate between those screened and the control group. However, the 5 year survival rate was significantly higher in the intervention group compared to the</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The Evidence Update found new evidence on population screening for oral cancer. However, it was concluded that this new evidence was unlikely to impact on current guideline recommendations. This is because the study was conducted in India and so its findings are unlikely to have direct application to UK clinical practice because oral cancer is more common in India than in the UK. Furthermore, screening is not covered in CSGHN.</p>

<p>control.</p> <p>The Evidence Update concluded that as this study was conducted in India its findings are unlikely to have direct application to UK clinical practice because oral cancer is more common in India than in the UK. Furthermore, screening is not covered in CSGHN.</p> <p><u>Imaging</u></p> <p>F-fluorodeoxyglucose positron emission tomography (FDG-PET)</p> <p>FDG-PET for the detection of distant metastases and secondary primary cancers was investigated in a meta-analysis of 12 studies (n=1276).¹⁰ The pooled sensitivity of FDG-PET was 0.89 and the specificity was 0.95.</p> <p>The Evidence Update stated that CSGHN recommends PET only for distinguishing between benign and malignant lung nodules but does state that the use of PET is expected to increase. The Evidence Update suggested that this evidence might be considered in a future update to guidance, especially for imaging in people with nasopharyngeal cancer.</p> <p>Endoscopy</p> <p>A meta-analysis¹¹ was identified which looked at fluorescence endoscopy for early diagnosis of laryngeal cancer or dysplastic lesions. Sixteen studies were included. Results showed that auto-</p>		<p>The Evidence Update also identified new evidence about the sensitivity and specificity of FDG-PET. The Evidence Update concluded that the evidence found was consistent with CSGHN which recommends the use of PET for distinguishing between benign and malignant lung nodules. CSGHN also states that the use of PET is expected to increase. The Evidence Update stated this area may be a consideration in a future update of the guidance.</p> <p>However, the evidence provided in the Evidence Update on FDG-PET is unlikely to impact on this guidance. This is because CSGHN provides guidance on services for head and neck cancer patients and does not specifically focus on diagnosis and treatment options. Nonetheless, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p> <p>Lastly, the Evidence Update found new evidence on fluorescence endoscopy. It was concluded that CSGHN does recognise that endoscopy is essential for inspecting inaccessible areas during initial investigations but it does not mention fluorescence. Due to this, the Evidence Update concluded that this area may be a consideration in a future update of the guidance.</p> <p>The evidence provided in the Evidence Update on fluorescence endoscopy is unlikely to impact on this guidance. This is because CSGHN provides guidance on services for head and neck cancer patients and does not specifically focus on</p>
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<p>fluorescence endoscopy (AFE) had higher sensitivity and specificity than white light endoscopy (WLE). Induced –fluorescence endoscopy (IFE) had higher sensitivity but lower specificity than WLE. In addition, there was no significant difference in sensitivity between AFE and IFE but AFE had higher specificity.</p> <p>The Evidence Update concluded that CSGHN recognises that endoscopy is essential for inspecting inaccessible areas during initial investigations but it does not mention fluorescence. As such, this area may be a consideration in a future update of the guidance.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		<p>diagnosis and treatment options. Nonetheless, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p>
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Clinical area: Structure of Services

Q: Does the volume of head and neck-cancer related interventions performed by a clinician affect outcomes?

Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p>None identified.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>Physician volume</p> <p>A retrospective cohort study¹² investigated the association between case volume of radiation oncologists and survival in patients with nasopharyngeal carcinoma. Results showed that</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The new evidence on surgeon volume indicates that high-volume surgeons and oncologists have better survival rates and lead to a decrease in complication rates. This evidence is consistent with that included in CSGHN and so is unlikely to impact on this guidance at this time.</p>

<p>those treated by high-volume radiation oncologists had better overall survival compared to those treated by low-volume radiation oncologists.</p> <p>A population based survey¹³ was identified which examined the association between physician case volume and survival rates in 1225 Taiwanese patients with nasopharyngeal carcinoma. It was found that patients treated by high-volume physicians had better 10 year survival rates to those treated by low/medium-volume physicians.</p> <p>A retrospective survey¹⁴ looked at surgeon preference for perioperative management of transoral robotic surgery and postoperative complications. It showed that the complication rate decreased significantly with higher surgeon case volume.</p>		
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Clinical area: Structure of Services

Q: Does the volume of head and neck cancer-related interventions performed at a hospital affect outcomes?

Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p>None identified.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>A cross-sectional ecological study¹⁵ was identified which investigated 11,573 cases of head and neck oncologic surgery and the impact of case volume. It was found that high volume hospitals had a lower complication rate compared to low</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The new evidence on hospital volume suggests that high hospital volume may lead to better survival rates and lower complication rates in head and neck cancer patients. This is consistent with the evidence already included in CSGHN.</p> <p>The new evidence looking at both surgeon and hospital volume suggests that high surgeon and hospital volume are beneficial for survival in head and neck cancer. This is consistent with the evidence provided in CSGHN.</p>

<p>volume hospitals.</p> <p>In another study¹⁶, data from the Surveillance, Epidemiology and End Results (SEER) – Medicare database was used to investigate the association between high volume hospitals, National Comprehensive Cancer Network (NCCN) guideline therapy and survival. Overall, 1195 patients were included. Results showed that head and neck squamous cell carcinoma patients treated at high volume hospitals were not more likely to receive therapy as per NCCN guidelines but had better survival rates than those treated at low volume hospitals.</p> <p>A retrospective cross-sectional analysis¹⁷ of 2370 elderly patients with laryngeal squamous cell cancer (SCCA) was identified. This found that high volume care was not associated with survival for non-operative treatment but was associated with improved survival in those receiving surgery. Furthermore, high-volume care was found to be associated with significantly lower costs of care for surgical patients but was not associated with differences in costs for patients with non-operative treatment.</p> <p>The impact of hospital volume on surgical outcomes was examined in a retrospective cohort study of 3850 cases of sinonasal malignancy¹⁸. Results indicated that complicated surgeries were more likely to occur at high volume hospitals without significant changes in surgical complication rates. High-volume centres had an increased rate of cardiopulmonary and electrolyte</p>		
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<p>complications but these were not found to be associated with higher mortality.</p> <p>Another retrospective cohort study¹⁹ investigated variation in bronchoscopy and esophagostomy use in 9218 patients with head and neck cancer undergoing diagnostic laryngoscopy. It was found that patients were more likely to undergo concurrent bronchoscopy and esophagoscopy at low and medium volume hospitals than in high volume hospitals.</p> <p>Surgeon and hospital volume</p> <p>A retrospective cross-sectional study²⁰ investigated the impact of surgical care on short term outcomes in 29,030 cases of oropharyngeal cancer. Results showed that high-volume hospitals were associated with an increased use of oropharyngeal surgery from 2001 to 2008 compared to 1993 to 2000. Furthermore, high volume hospitals were significantly associated with pharyngectomy whilst high-volume surgeons were found to be associated with flap reconstruction and prior radiation. A significant interaction was also found between high-volume surgeons and high-volume hospitals as reduced hospital costs for surgery were found when surgery was performed by high-volume surgeons at high volume hospitals.</p> <p>A retrospective cohort study²¹ investigated the impact of surgeon and hospital volume on long-term survival in 5720 head and neck cancer patients. It was found that both high surgeon and</p>		
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<p>hospital volume were predictors of better overall survival. However, this effect was largely explained by hospital volume.</p> <p>A systematic review²² examined the volume-outcome relationship in the treatment of patients with head and neck cancer. Seventeen studies were included. Results showed that high volume hospitals and high volume surgeons had better overall survival compared to their low volume counterparts.</p>		
<p>Clinical area: Initial investigation and diagnosis</p>		
<p>Q: In patients with symptoms suggestive of thyroid cancer (enlarged thyroid or thyroid lump) what effect does performing fine needle aspiration (FNA) cytology to confirm or exclude malignancy have on stage of tumours identified at referral, diagnostic indices and patient outcomes including the number of patients receiving unnecessary or inappropriate surgery?</p>		
<p>Evidence summary</p>	<p>GDG/clinical perspective</p>	<p>Impact</p>
<p><u>Evidence Update (2012)</u></p> <p>Fine needle aspiration cytology of salivary glands</p> <p>A systematic review²³ was identified which examined studies of histological diagnoses of salivary gland tumours that reported the correlation between fine needle aspiration cytology and histological results. Sixteen studies of 2018 patients were included. Results showed that 93.2% of cases identified as malignant on fine needle aspiration were confirmed as such histologically. Furthermore, 95.46% of cases identified as benign on fine needle aspiration were confirmed as such histologically.</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The Evidence Update found new evidence on fine needle aspiration cytology of the salivary glands. The Evidence update concluded that the new evidence was supportive of the recommendations already included in CSGHN.</p>

<p>The Evidence Update concluded that this study supported the recommendations already included in CSGHN.</p> <p><u>10- Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		
<p>Clinical area: Primary treatment</p>		
<p>Q: In patients with head and neck cancer (primary disease) what are the relative efficacies of brachytherapy, normal fractionation external beam radiotherapy, accelerated fractionation external beam radiotherapy, altered fractionation external beam radiotherapy, chemoradiotherapy, surgery, chemotherapy and endoscopic/laser excision, alone or in combination, in terms of long term survival, peri-treatment mortality, recurrence rates, incidence and severity of morbidity, voice outcomes, facial nerve damage, xerostomia, complication rates, quality of life, anxiety, patient satisfaction or other patient outcomes?</p>		
<p>Evidence summary</p>	<p>GDG/clinical perspective</p>	<p>Impact</p>
<p><u>Evidence Update (2012)</u></p> <p><u>Radiotherapy</u></p> <p>Radiation dosing regimens</p> <p>An updated Cochrane review²⁴ investigated overall survival with radiotherapy in head and neck cancer patients. Fifteen trials were included. It was found that altered fractionated radiotherapy was significantly better than conventional therapy whilst hyperfractionated radiotherapy was associated with the greatest absolute benefit compared with accelerated fractionation.</p> <p>Another Cochrane review²⁵ looked at 30 trials of radiotherapy in cancer of the oral cavity or oropharynx. It found that altered fractionation radiotherapy was associated with a reduction in</p>	<p>Feedback from the GDG members indicated that there were new chemotherapy regimens and IMRT/different oncological interventions available. Furthermore, it was noted that there are new surgical treatments and that robotic/transoral laser was becoming more common. However, no references were provided for these comments.</p> <p>The GDG also suggested that results of the PET neck study may produce new guidance and stated that there was new evidence on the use of preventative therapy. However, no references to the evidence were provided for these comments.</p> <p>The following references were also provided by the GDG:</p>	<p>The Evidence Update found new evidence about radiation dosing regimens. It concluded that this evidence adds to that already included in CSGHN but suggested that it may be considered in an update to guidance.</p> <p>However, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p> <p>New evidence on swallowing outcomes after radiotherapy was also found. However, the Evidence Update concluded that this evidence was unlikely to impact on CSGHN. This was because the evidence was limited. It was suggested that further research in this area is needed along with an increased reporting of dysphagia as an adverse event in radiotherapy studies.</p>

<p>mortality at 5 years when compared to conventional radiotherapy. Furthermore, locoregional control was found to be better with altered fractionation radiotherapy but no difference was seen between the two forms of radiotherapy in disease free survival.</p> <p>The Evidence Updated concluded that this evidence adds to that on radiation dosing regimens which CSGHN covers and suggested that this evidence may be considered in an update to the guidance. Furthermore, CSGHN does mention the use of hyperfractionated and accelerated radiotherapy but the evidence was limited.</p> <p>Swallowing outcomes after radiotherapy</p> <p>A systematic review²⁶ of 16 studies (n=1012) investigated swallowing outcomes after intensity modulated radiation therapy for head and neck cancer. The included studies suggested that limiting the radiation dose to some structures may be beneficial for some swallowing outcomes. However, the authors stated that the included studies were limited in study design and outcome data and suggested that further well-designed studies were needed.</p> <p>The Evidence Update concluded that this evidence is unlikely to impact on guidance and suggested that further studies in this area are needed.</p> <p><u>Surgery</u></p>	<p>Use of stents in head & neck surgery. Carrau RL Curr Opin Otolaryngol head & neck surgery 2005 13(2): 105-6</p> <p>Laser debulking in malignant upper airways obstruction. Paleri V, Stafford FW, Sammut MS Head Neck 2005; 27(4): 296-301</p> <p>Impact of surgical resection on survival in patients with advanced head & neck cancer involving the carotid artery. Manzoor NF et al JAMA Otolaryngol head & neck surg 2013;139(11):1219-25</p> <p>Carotid blowout. Dixon L & Warriner D Br J Hosp Med 2012;73(7): 98-100</p> <p>Acute life threatening haemorrhage in patients with head & neck cancer presenting with carotid blowout syndrome: follow up results after initial haemostasis with carotid stent placement. Shah H, Gemmete JJ Chaudhury et al American J of Neuroradiology 2011 32(4): 743-7</p> <p>Transarterial embolization for control of bleeding. Chen YF et al Otolaryngol Head & neck surgery 2010;142(1):90-4</p> <p>Acute haemorrhage in patients with advanced head & neck cancer value of endovascular treatment in palliative</p>	<p>The Evidence Update also identified new evidence on elective and therapeutic neck dissection. However, the Evidence Update suggested that this evidence was unlikely to impact on the guideline. This was because the included study did not take into account the stage of the primary tumour and included studies which were outdated in terms of treatment and imaging standards. Furthermore, this topic is not covered by CSGHN. The remaining two studies on neck surgery were also considered not to impact upon CSGHN. This was because the evidence was limited and was considered unlikely to change current practice.</p> <p>New evidence was also found by the Evidence Update on the timing of dental implant surgery. The Evidence Update concluded that this study was unlikely to affect a future update of the guideline since CSGHN does not make specific recommendations about the timing of placing dental implants. Furthermore, new evidence was found on open partial laryngectomy. The Evidence Update concluded that the results suggest that open partial laryngectomy is clinically effective, which could change clinical practice in the UK from total laryngectomy to this organ-sparing procedure, and thus could be a consideration in future updates to guidance.</p> <p>In addition, the Evidence Update provided new evidence on surgery versus radiotherapy. As CSGHN does not make recommendations about treatment choice it was concluded that this</p>
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<p>Elective versus therapeutic neck dissection</p> <p>A systematic review²⁷ of 23 studies (n=1611) was identified. In it the authors proposed that the number needed to treat was a clinically intuitive parameter that could be used to guide the level of treatment in patients with squamous cell carcinoma of the head and neck. They suggested that if the risk of occult metastasis was 20% or more then the patient should have treatment of the neck.</p> <p>The Evidence Update stated that as this study did not take into account the stage of the primary tumour and since some of the included studies dated back to a time when treatment and imaging standards differed from current practice, the evidence was unlikely to impact on guidance. Furthermore, this topic was not covered by CSGHN.</p> <p>A Cochrane review²⁸ investigated surgical treatments for oral and pharyngeal cancers. Seven trials were included (n=570). The findings from four trials suggested that elective neck resection reduced locoregional recurrence rates when compared to therapeutic delayed neck dissection. However, meta-analysis could not be performed due to differences in types of surgery and the duration of follow-up. Two trials showed no difference in overall survival between elective radical neck dissection and selective neck dissection and one study showed no difference between these two treatments in disease free</p>	<p>treatment option. Sesterhenn AM, Iwinska-zelder J J laryngol otol 2006 ; 120(2)</p> <p>Carotid stenting for impending carotid blowout: suitable supportive care for head & neck cancer patients? Desuter G et al Palliat Med 2005;19(5): 427-9</p> <p>Clinical applications of palifermin – amelioration of oral mucositis & other potential implications. Vadhan-Roy S, et al. J Cell Mol Med 2013; 17(11) 1371-84</p> <p>New developments in management of oral musositis in patients with head & neck cancer receiving targeted anticancer therapies. Am J Health Syst Pharm 2012; 69(12):1031-7</p> <p>However, these references are unlikely to impact on CSGHN since it specifically provides guidance on services for adult patients with cancers of the head and neck. However, it is anticipated that they may be relevant to the new Upper airways tract cancer guideline which is currently in development and will include recommendations on assessment and management of upper airways tract cancers.</p>	<p>evidence may be a consideration in a future update to guidance.</p> <p>The Evidence Update also found new evidence which looked at mixed treatment comparisons. Currently, CSGHN does not make specific recommendations about the timing or regimens of chemotherapy. The Evidence Update concluded that the evidence in this area could be a consideration in a future update to guidance.</p> <p>However, The evidence provided in the Evidence Update on mixed treatment comparisons, open partial laryngectomy and surgery versus radiotherapy is unlikely to impact on this guideline. This is because CSGHN provides guidance on services for head and neck cancer patients and does not specifically focus on diagnosis and treatment options. Nonetheless, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p> <p>For biological treatments, the evidence identified by the Evidence Update was unlikely to impact on CSGHN. This was because hypomagnesaemia is already a recognised side effect of cetuximab. Furthermore, in one study, the heterogeneity of the patient populations and concurrent chemotherapy regimens meant that a clear impression of the benefits of cetuximab in head and neck cancer could not be gained.</p> <p>The Evidence Update also found new evidence relating to alternative therapies, nutritional support and psychological therapies. For all three areas</p>
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<p>survival and recurrence.</p> <p>The Evidence Update concluded that due to the limited evidence provided by this study it was unlikely to affect an update of CSGHN.</p> <p>A meta-analysis²⁹ examined the outcomes of elective or therapeutic neck dissection in people with oral cavity cancers and node-negative neck. It included four trials (n=283). Results showed that elective surgery was associated with a lower risk of disease-specific death. However, the three trials showing the most benefit were 20 or more years old whilst the recent study found no benefit of elective surgery.</p> <p>The Evidence Update concluded that this evidence was unlikely to change current practice.</p> <p>Timing of dental implant surgery</p> <p>A systematic review³⁰ evaluated the placement of primary osseointegrated dental implants at the same time as radical surgery. Forty one papers were included but meta-analysis was not attempted. For the number of implants, implants used for reasons other than restoration, failure of implants and survival of implants the data were incomplete. However, from the studies which reported on the survival of implants, 96-100% were reported as surviving with a follow-up range of 15-96 months.</p> <p>The Evidence Update concluded that this study was unlikely to affect a future update of the</p>		<p>the evidence was found not to impact on CSGHN. This was due to a lack of evidence provided for nutritional support, the importance of psychological therapies already being recognised by the guideline and because CSGHN does not cover acupuncture.</p> <p>Clinical feedback highlighted new chemotherapy regimens, oncological interventions, surgical treatments and robotic/transoral laser for head and neck cancers. However, no study details were provided and no additional evidence beyond those studies included in the Evidence Update in this area were identified through this surveillance review.</p> <p>The references that were provided by the GDG are unlikely to currently impact on CSGHN. This is because this guidance is concerned with service use and not specific treatment interventions. However, it is anticipated that they may be relevant to the new Upper airways tract cancer guideline which is currently in development and will include recommendations on assessment and management of upper airways tract cancers.</p>
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<p>guideline since CSGHN does not make specific recommendations about the timing of placing dental implants.</p> <p>Open partial laryngectomy</p> <p>A meta-analysis³¹ investigated open partial laryngectomy for the treatment of early laryngeal carcinoma that had recurred after initial radiotherapy. It included 26 papers (n=560). The results showed that open partial laryngectomy was effective.</p> <p>Currently, CSGHN does not address this topic. The Evidence Update concluded that the results suggest that open partial laryngectomy is clinically effective, which could change clinical practice in the UK from total laryngectomy to this organ-sparing procedure, and thus could be a consideration in future updates to guidance.</p> <p>Surgery versus radiotherapy</p> <p>A cost-utility analysis³² compared CO₂ endolaryngeal laser excision with standard fractionated radiation therapy in early stage glottic cancer. The study was conducted in Canada. It was found that CO₂ endolaryngeal laser excision was cheaper and more effective than its counterpart.</p> <p>The Evidence Update concluded that the direct application of this study's findings to the UK is precluded by the differences between the Canadian and UK healthcare systems however,</p>		
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<p>the information may be useful in guiding treatment choice. It was concluded that this evidence may be a consideration in a future update to guidance.</p> <p>A systematic review³³ examined radiotherapy and transoral laser microsurgery for the treatment of early glottic cancer. Twenty one studies of 880 patients were included. The review concluded that the evidence found did not show a difference between radiotherapy and transoral laser surgery in this type of cancer.</p> <p>The Evidence Update concluded that this evidence was unlikely to impact on CSGHN as this guideline does not make any recommendations about treatment choice. The Evidence Update stated that CSGHN already contains a systematic review comparing radiotherapy with surgery for this type of cancer. However, it showed little difference between the two treatments.</p> <p>Mixed treatment comparisons</p> <p>An individual patient data meta-analysis³⁴ was identified. This included 87 studies of 16,485 patients with squamous cell carcinoma of the head and neck. Results showed that locoregional treatment plus chemotherapy was better than locoregional treatment alone. When stratified by tumour type and timing of chemotherapy, it was found that the chemotherapy concomitant with locoregional treatment significantly improved survival in tumours of the oropharynx and larynx. No significant improvement in survival with</p>		
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<p>adjuvant and neoadjuvant therapy and no impact of chemotherapy timing was found for tumours of the oral cavity or hypopharynx.</p> <p>The Evidence Update stated that due to the enrolment period for this study, it was unlikely to have included some of the neoadjuvant chemotherapy regimens which are currently used in clinical practice therefore limiting its likely impact on the guideline.</p> <p>A network meta-analysis³⁵ was also identified which included 102 trials of 23,000 patients with non-metastatic squamous cell carcinoma of the head and neck. Overall, results showed that altered fractionated radiotherapy with concomitant chemotherapy was most likely to be the best treatment option.</p> <p>Currently, CSGHN does not make specific recommendations about the timing or regimens of chemotherapy. The Evidence Update concluded that the evidence in this area could be a consideration in a future update to guidance.</p> <p>Biological Treatments</p> <p>Hypomagnesaemia in patients with advanced cancer treated with cetuximab was investigated in a meta-analysis³⁶. This included 19 studies (n=4559) but only 629 patients had head and neck cancer. Results showed that the incidence of hypomagnesaemia was 36.7% and the incidence of grade 3 and 4 hypomagnesaemia was 5.6%.</p>		
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<p>Hypomagnesaemia is a recognised side effect of cetuximab treatment and so the Evidence Update concluded that this evidence was unlikely to affect future updates to the guideline.</p> <p>A systematic review³⁷ of 14 trials examined cetuximab in head and neck cancer patients with results being separated by trial phase. In phase I and II trials 18.7% of patients showed an overall response to cetuximab. For phase III trials the overall response was 17% for platinum-based regimens plus placebo but 34.2% for platinum based regimens plus cetuximab. Furthermore, survival increased in those in the cetuximab group.</p> <p>The Evidence Update concluded that this study was unlikely to influence an update of the guidance. This was because a clear impression of the benefits of cetuximab in head and neck cancer could not be identified due to the heterogeneity of the patient population and concurrent chemotherapy regimens in the included study. Furthermore, CSGHN does not cover the use of cetuximab.</p> <p>Alternative therapies</p> <p>A systematic review³⁸ investigated acupuncture for the treatment of radiation-induced xerostomia. It included three studies. No evidence for the benefit of acupuncture was found.</p> <p>As CSGHN does not cover acupuncture the</p>		
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<p>Evidence Update concluded that this study was unlikely to impact on the guideline. It was stated that further studies with standardised treatments and a valid comparator are needed.</p> <p>Nutritional Support</p> <p>A Cochrane review³⁹ evaluated different enteral feeding methods in head and neck cancer patients undergoing radiotherapy or chemotherapy. Only one study (n=33) was included. This found that nasogastric feeding led to greater weight loss compared to percutaneous endoscopic gastrostomy (PEG). Furthermore, PEG feeding lasted significantly longer and cost more than nasogastric feeding. The authors concluded that more research is needed so that the optimum feeding method can be determined.</p> <p>The Evidence Update concluded that this study was unlikely to affect an update of CSGHN due to the lack of evidence it provided.</p> <p>Psychological therapies</p> <p>Psychological interventions for head and neck cancer patients were examined in a systematic review⁴⁰. Nine studies of 627 patients were included. The authors concluded that the evidence for psychological interventions was limited by a small number of studies, methodological issues and poor comparability between interventions. They noted that none of the included interventions were supported by the necessary level of evidence.</p>		
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<p>The Evidence Update stated that this evidence was unlikely to impact on future guidance since CSGHN already recognises the importance of psychological interventions in the management of head and neck cancer patients.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		
<p>Clinical area: After-care and rehabilitation</p>		
<p>Q: In patients who have been treated for head and neck cancer, does involvement in the management of the patient by a restorative dentist, in the after treatment care period, improve outcomes?</p>		
<p>Evidence summary</p>	<p>GDG/clinical perspective</p>	<p>Impact</p>
<p><u>Evidence Update (2012)</u></p> <p>Dental care</p> <p>A systematic review⁴¹ investigated the factors that influenced the development of osteoradionecrosis of the jaw after tooth extraction in patients with head and neck cancer who had undergone radiation treatment. Nineteen papers were included. It was found that the overall occurrence in those who received prophylactic hyperbaric oxygen therapy before extraction was 4%. Extractions outside the field of radiation treatment or with doses of radiation less than 60 GY showed almost no risk of developing osteoradionecrosis.</p> <p>The Evidence update concluded that due to the limited quality of this evidence it would not impact</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>The Evidence Update identified new evidence relating to the development of osteoradionecrosis of the jaw after tooth extraction in patients with head and neck cancer who had undergone radiation treatment. However, it concluded that this evidence would not impact on CSGHN due to its limited quality.</p> <p>New evidence on the prevention and treatment of osteoradionecrosis of the jaw after radiotherapy or brachytherapy with or without chemotherapy was also provided in the Evidence Update. The Evidence Update concluded that NICE CSGHN does not deal with osteoradionecrosis directly but instead recommends that a consultant with experience in maxillofacial prosthetics and implantology should liaise with primary care dental practitioners to co-ordinate the dental care of patients after treatment.</p>

<p>on future updates of the guidance.</p> <p>A review⁴² was identified which included 43 articles on the prevention and treatment of osteoradionecrosis of the jaw after radiotherapy or brachytherapy with or without chemotherapy for head and neck cancer (n=1537). The main strategy for prevention was the use of hyperbaric oxygen therapy which was also the most studied treatment method. Reported response to treatment ranged from 19% to 93%.</p> <p>The Evidence Update concluded that NICE CSGHN does not deal with osteoradionecrosis directly but instead recommends that a consultant with experience in maxillofacial prosthetics and implantology should liaise with primary care dental practitioners to co-ordinate the dental care of patients after treatment.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		
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Clinical area: Follow-up and recurrent disease

Q: For patients who have been treated for head and neck cancer, what is the effect of routine follow-up on outcomes including timelines of detection of local recurrence or second primary tumour?

Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p>Early discharge in laryngeal dysplasia</p> <p>A meta-analysis⁴³ of case series was identified</p>	<p>No GDG feedback was provided by the GDG questionnaire.</p>	<p>New evidence on early discharge in laryngeal dysplasia was provided in the Evidence Update. The Evidence Update concluded that CSGHN recommends discharge from follow-up after 5 years for those with cancer but does not mention</p>

<p>which aimed to determine the rate of transformation to cancer and the time to transformation in 940 cases (9 studies) of laryngeal dysplasia. A significant association between histological grade and rate of transformation was found but no significant association was identified between grade of dysplasia and time to transformation.</p> <p>The Evidence Update concluded that CSGHN recommends discharge from follow-up after 5 years for those with cancer but does not mention follow-up for dysplasia. As such, the Evidence Update concluded that this evidence could be considered in future guidance.</p> <p><u>10-Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>		<p>follow-up for dysplasia. The Evidence Update concluded that this evidence could be considered in future guidance.</p> <p>The evidence provided in the Evidence Update on early discharge in laryngeal dysplasia is unlikely to impact on this guidance. This is because CSGHN provides guidance on services for head and neck cancer patients and does not specifically focus on diagnosis and treatment options. Nonetheless, this evidence may be more relevant to the in-development guideline on Upper airways tract cancer.</p>
Clinical area: Follow-up and recurrent disease		
Q: In patients who have been treated for head and neck cancer, what are the relative efficacies of PET, MRI, CT and ultrasound scanning in the detection of recurrence?		
Evidence summary	GDG/clinical perspective	Impact
<p><u>Evidence Update (2012)</u></p> <p>None identified.</p> <p><u>10- Year Surveillance Review (2015)</u></p> <p>No new evidence in this area was considered.</p>	<p>Clinical feedback indicated that there are new roles for PET CT in people with UAT cancers. However, no references for the new evidence were provided.</p>	<p>The clinical feedback is unlikely to impact on CSGHN. This is because no study details were provided and no evidence in this area was identified through the surveillance review.</p>

For the following areas of the guideline no new evidence was considered:

- Pre-treatment assessment and management
- Palliative interventions and care

Ongoing research

The following ongoing studies were highlighted by the GDG:

- DeEscalate trial ([ISRCTN33522080](#)) – A multi-centre RCT determining the optimum treatment for patients with Human Papillomavirus positive oropharyngeal squamous cell carcinoma. The end date for this trial is 28/2/17.
- ART DECO trial ([ISRCTN01483375](#)) – A multi-centre RCT of dose escalated intensity modulated radiotherapy versus standard dose intensity modulated radiotherapy in 246 patients with laryngeal and hypopharyngeal cancers in the UK. The end date for this trial is 07/03/2020.
- Head and Neck 5000 Trial – [A cohort study](#) of 5000 head and neck cancer patients to evaluate the outcome of centralisation in head and neck cancer. No end date was found for this study.
- NIMRAD study ([NCT01950689](#)) – An RCT of Nimorazole versus radiotherapy in patients with head and neck squamous cell carcinoma who are not suitable for synchronous chemotherapy or cetuximab. The end date for this study is June 2020.

Anti-discrimination and equalities considerations

None identified.

Conclusion

Through the 10 year surveillance review of CSGHN no new evidence which may potentially change the direction of guidance recommendations was identified. The proposal is not to update the guidance at this time and to move this guidance onto the static list because it fulfils the following criteria:

- No evidence was identified that would impact on the current guidance and no quality standard has been commissioned.

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