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## ELIGIBILITY

- Salivary cancer treated with surgery with or without radiation therapy **and**
- 4 years post-treatment **and**
- NED

## CONCURRENT COMPONENTS OF VISIT

### SURVEILLANCE

- Transition to HNSVC within 6-12 months to include:
  - History and physical exam
  - Chest x-ray
  - CT head and neck (or MRI, per baseline imaging study) if less than or equal to 5 years from completion of treatment, **then**
- History and physical exam annually with:
  - Chest x-ray
  - CT head and neck (or MRI, per baseline imaging study) through 5 years from the end of treatment

### MONITORING FOR LATE EFFECTS

- Consider:
- Annual audiogram
  - Xerostomia assessment
  - Dental/osteoradionecrosis assessment
  - Neurocognitive dysfunction assessment
  - Annual TSH (thyroid-stimulating hormone) and free T4 if treated with radiation therapy
  - Dysphagia assessment
  - Speech pathology assessment
  - Lymphedema assessment
  - Sexual health/fertility assessment
  - Peripheral neuropathy assessment

### RISK REDUCTION/EARLY DETECTION

- Patient education, counseling and screening:
- Lifestyle risk assessment<sup>1</sup>
  - Cancer screening<sup>2</sup>
  - Vaccinations<sup>3</sup> as appropriate
  - HPV vaccination as clinically indicated (see [HPV Vaccination algorithm](#))
  - Screening for Hepatitis B and C as clinically indicated (see [Hepatitis Screening and Management – HBV and HCV algorithm](#))
  - Consider cardiovascular risk reduction<sup>4</sup>
  - Limit alcohol consumption

### PSYCHOSOCIAL FUNCTIONING

- Assess for:
- Distress management (see [Distress Screening and Psychosocial Management algorithm](#))
  - Anxiety/depression
  - Body image
  - Social support
  - Financial stressors

New primary or recurrent cancer?

Yes  
No

## DISPOSITION

Return to primary treating physician

Continue survivorship monitoring

Refer or consult as indicated

NED = no evidence of disease

HNSVC = Head and Neck Survivorship clinic

<sup>1</sup> See [Physical Activity, Nutrition](#), and [Tobacco Cessation](#) algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

<sup>2</sup> Includes [breast](#), [cervical](#) (if appropriate), [colorectal](#), [liver](#), [lung](#), [pancreatic](#), [prostate](#), and [skin cancer](#) screening

<sup>3</sup> Based on [Centers for Disease Control and Prevention \(CDC\) guidelines](#)

<sup>4</sup> Consider use of Vanderbilt's [ABCDE's approach to cardiovascular health](#)

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## SUGGESTED READINGS

- American Cancer Society. (n.d.). American Cancer Society guidelines for the early detection of cancer. Retrieved from <https://www.cancer.org/healthy/find-cancer-early/cancer-screening-guidelines/american-cancer-society-guidelines-for-the-early-detection-of-cancer.html>
- Baxi, S. S., Pinheiro, L. C., Patil, S. M., Pfister, D. G., Oeffinger, K. C., & Elkin, E. B. (2014). Causes of death in long-term survivors of head and neck cancer. *Cancer*, *120*(10), 1507-1513. <https://doi.org/10.1002/cncr.28588>
- Centers for Disease Control and Prevention. (2020). *Recommended Adult Immunization Schedule for Ages 19 Years or Older, United States, 2020*. Retrieved from <https://www.cdc.gov/vaccines/schedules/hcp/imz/adult.html>
- der Maur, C. D. I., Klokman, W. J., van Leeuwen, F. E., Tan, I. B., Emiel, J. T., & Balm, A. J. (2005). Increased risk of breast cancer development after diagnosis of salivary gland tumor. *European Journal of Cancer*, *41*(9), 1311-1315. <https://doi.org/10.1016/j.ejca.2005.02.023>
- Dirix, P., Nuyts, S., Vander Poorten, V., Delaere, P., & Van den Bogaert, W. (2008). The influence of xerostomia after radiotherapy on quality of life. *Supportive Care in Cancer*, *16*(2), 171-179. <https://doi.org/10.1007/s00520-007-0300-5>
- Epstein, J. B., Robertson, M., Emerton, S., Phillips, N., & Stevenson-Moore, P. (2001). Quality of life and oral function in patients treated with radiation therapy for head and neck cancer. *Head & Neck*, *23*(5), 389-398. <https://doi.org/10.1002/hed.1049>
- Galloway, T., & Amdur, R.J. (2020). Management of late complications of head and neck cancer and its treatment. *UpToDate*. Retrieved September 30, 2020, from <https://www.uptodate.com/contents/management-of-late-complications-of-head-and-neck-cancer-and-its-treatment>
- Gilbert, J., Murphy, B., & Jackson, L. (2020). Health-related quality of life in head and neck cancer. Retrieved September 30, 2020, from <https://www.uptodate.com/contents/health-related-quality-of-life-in-head-and-neck-cancer>
- Joshi, A., Calman, F., O'Connell, M., Jeannon, J. P., Pracy, P., & Simo, R. (2010). Current trends in the follow-up of head and neck cancer patients in the UK. *Clinical Oncology*, *22*(2), 114-118. <https://doi.org/10.1016/j.clon.2009.11.004>
- Licitra, L., Felip, E., & ESMO Guidelines Working Group. (2009). Squamous cell carcinoma of the head and neck: ESMO clinical recommendations for diagnosis, treatment and follow-up. *Annals of Oncology*, *20*(4), 121-122. <https://doi.org/10.1093/annonc/mdp149>
- Mortensen, H. R., Jensen, K., Aksglæde, K., Behrens, M., & Grau, C. (2013). Late dysphagia after IMRT for head and neck cancer and correlation with dose-volume parameters. *Radiotherapy and Oncology*, *107*(3), 288-294. <https://doi.org/10.1016/j.radonc.2013.06.001>
- National Comprehensive Cancer Network. (2020). *Head and Neck Cancers* (Version 2.2020). [https://www.nccn.org/professionals/physician\\_gls/pdf/head-and-neck.pdf](https://www.nccn.org/professionals/physician_gls/pdf/head-and-neck.pdf)
- National Comprehensive Cancer Network. (2020). *Survivorship* (Version 1.2020). [https://www.nccn.org/professionals/physician\\_gls/pdf/survivorship.pdf](https://www.nccn.org/professionals/physician_gls/pdf/survivorship.pdf)
- Patel, N., Har-El, G., & Rosenfeld, R. (2001). Quality of life after great auricular nerve sacrifice during parotidectomy. *Arch Otolaryngol Head Neck Surg*, *127*(7), 884-888. <https://doi.org/10-1001/pubs.Arch Otolaryngol. Head Neck Surg.-ISSN-0886-4470-127-7-ooa00173>

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## SUGGESTED READINGS

- Rogers, L. Q., Rao, K., Malone, J., Kandula, P., Ronan, O., Markwell, S.J. & Robbins, T. (2009). Factors associated with quality of life in outpatients with head and neck cancer 6 months after diagnosis. *Head and Neck*, 31(9), 1207-1214. <https://doi.org/10.1002/hed.21084>
- Roh, J. L., Kim, A. Y., & Cho, M. J. (2005). Xerostomia following radiotherapy of the head and neck affects vocal function. *Journal of Clinical Oncology*, 23(13), 3016-3023. <https://doi.org/10.1200/JCO.2005.07.419>
- Saba, N.F. (2020). Posttreatment surveillance of squamous cell carcinoma of the head and neck. *UpToDate*. Retrieved September 30, 2020, from <https://www.uptodate.com/contents/posttreatment-surveillance-of-squamous-cell-carcinoma-of-the-head-and-neck>
- Strigari, L., Benassi, M., Arcangeli, G., Bruzzaniti, V., Giovinazzo, G., & Marucci, L. (2010). A novel dose constraint to reduce xerostomia in head-and-neck cancer patients treated with intensity-modulated radiotherapy. *International Journal Radiation Oncology\* Biology\* Physics*, 77(1), 269-276. <https://doi.org/10.1016/j.ijrobp.2009.07.1734>
- Vanderbilt Cardio-Oncology Program. (2017). *Know Your ABCDE's*. Retrieved from <http://www.cardioonc.org/2017/08/29/know-your-abcs/>

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## DEVELOPMENT CREDITS

This survivorship algorithm is based on majority expert opinion of the Head and Neck Survivorship work group at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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