

AHNS Fellowship Reading Curriculum Guidelines

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1. Not more than 5-7 years old (unless a classic or a very important article)
2. Original research. Reviews are limited and only if they are published in a high impact journal and in the last 3 years or so.

Top 10 Must Read

1. Oliver, J.R., Lieberman, S.M., Tam, M.M., Liu, C.Z., Li, Z., Hu, K.S., Morris, L.G.T. and Givi, B. (2020), Human papillomavirus and survival of patients with sinonasal squamous cell carcinoma. *Cancer*, 126: 1413-1423. <https://doi.org/10.1002/cncr.32679>
2. Abdelmeguid AS, Teeramawanich W, Roberts DB, Amit M, Ferraroto R, Glisson BS, Kupferman ME, Su SY, Phan J, Garden AS, Raza SM, DeMonte F, Hanna EY. Neoadjuvant chemotherapy for locoregionally advanced squamous cell carcinoma of the paranasal sinuses. *Cancer*. 2021 Jun 1;127(11):1788-1795. doi: 10.1002/cncr.33452. Epub 2021 Feb 10. PMID: 33567468.
3. French CA. NUT Carcinoma: Clinicopathologic features, pathogenesis, and treatment. *Pathol Int*. 2018 Nov;68(11):583-595. doi: 10.1111/pin.12727. Epub 2018 Oct 26. PMID: 30362654. [Pubmed Link](#)
4. Amit M, Abdelmeguid AS, Watcherporn T, Takahashi H et al. Induction Chemotherapy Response as a Guide for Treatment Optimization in Sinonasal Undifferentiated Carcinoma. *J Clin Oncol*. 2019; 37(6): 504-512. [Pubmed Link](#)
5. Kuan EC, Nasser HB, Carey RM et al. A Population-Based Analysis of Nodal Metastases in Esthesioneuroblastomas of the Sinonasal Tract. *Laryngoscope* 2019; 129:1025-1029.
6. Jiang W, Mohamed ASR, Fuller CD et al. The role of elective nodal irradiation for esthesioneuroblastoma patients with clinically negative neck. *Pract Radiat Oncol* 2016; 6:241-247
7. Turri-Zanoni M, Maragliano R, Battaglia P, Giovannardi M, Antognoni P, Lombardi D, Morassi ML, Pasquini E, Tarchini P, Asioli S, Foschini MP, Sessa F, Nicolai P, Castelnuovo P, La Rosa S. The clinicopathological spectrum of olfactory neuroblastoma and sinonasal neuroendocrine neoplasms: Refinements in diagnostic criteria and impact of multimodal treatments on survival. *Oral Oncol*. 2017 Nov;74:21-29. PMID: 29103747.
8. Kaplan DJ, Kim JH, Wang E, Snyderman C. Prognostic Indicators for Salvage Surgery of Recurrent Sinonasal Malignancy. *Otolaryngol Head Neck Surg*. 2016 Jan;154(1):104-12. doi: 10.1177/0194599815606699. Epub 2015 Sep 30. PMID: 26424747.
9. Abdelmeguid AS, Raza SM, Su SY, Kupferman M, Roberts D, DeMonte F, Hanna EY. Endoscopic resection of sinonasal malignancies. *Head Neck*. 2020 Apr;42(4):645-652. doi: 10.1002/hed.26047. Epub 2019 Dec 24. PMID: 31875340.
10. Choi KY, Amit M, Tam S, Bell D, Phan J, Garden AS, Williams MD, Ferrarotto R, El-Naggar AK, Raza SM, DeMonte F, Kupferman ME, Hanna EY, Su SY. Clinical Implication of Diagnostic and Histopathologic Discrepancies in Sinonasal Malignancies. *Laryngoscope*. 2020 Sep 18. doi: 10.1002/lary.29102. Epub ahead of print. PMID: 32946597.

11. Kassam A, Snyderman CH, Mintz A, Gardner P, Carrau RL. Expanded endonasal approach: the rostrocaudal axis. Part I. Crista galli to the sella turcica. *Neurosurg Focus*. 2005 Jul 15;19(1):E3. PMID: 16078817.
12. Kassam A, Snyderman CH, Mintz A, Gardner P, Carrau RL. Expanded endonasal approach: the rostrocaudal axis. Part II. Posterior clinoids to the foramen magnum. *Neurosurg Focus*. 2005 Jul 15;19(1):E4. PMID: 16078818.

By Pathology

1. Squamous Cell Carcinoma

- 1.1. Kılıç S, Kılıç SS, Kim ES, Baredes S, Mahmoud O, Gray ST, Eloy JA. Significance of human papillomavirus positivity in sinonasal squamous cell carcinoma. *Int Forum Allergy Rhinol*. 2017 Oct;7(10):980-989. doi: 10.1002/alr.21996. Epub 2017 Aug 31. PMID: 28859244.
- 1.2. Cracchiolo JR, Patel K, Migliacci JC, Morris LT, Ganly I, Roman BR, McBride SM, Tabar VS, Cohen MA. Factors associated with a primary surgical approach for sinonasal squamous cell carcinoma. *J Surg Oncol*. 2018 Mar;117(4):756-764. doi: 10.1002/jso.24923. Epub 2017 Nov 28. PMID: 29193098; PMCID: PMC5878715.
- 1.3. Paver EC, Currie AM, Gupta R, Dahlstrom JE. Human papilloma virus related squamous cell carcinomas of the head and neck: diagnosis, clinical implications and detection of HPV. *Pathology*. 2020 Feb;52(2):179-191. doi: 10.1016/j.pathol.2019.10.008. Epub 2019 Dec 27. PMID: 31889547.
- 1.4. de Almeida JR, Su SY, Koutourousiou M, Vaz Guimaraes Filho F, Fernandez Miranda JC, Wang EW, Gardner PA, Snyderman CH. Endonasal endoscopic surgery for squamous cell carcinoma of the sinonasal cavities and skull base: Oncologic outcomes based on treatment strategy and tumor etiology. *Head Neck*. 2015 Aug;37(8):1163-9. doi: 10.1002/hed.23731. Epub 2014 Jul 11. PMID: 24798497.
- 1.5. Kilic S, Kilic SS, Baredes S, et al. Comparison of endoscopic and open resection of sinonasal squamous cell carcinoma: a propensity score-matched analysis of 652 patients. *Int Forum Allergy Rhinol*. 2018;8:421-434.
- 1.6. Abdelmeguid AS, Silver NL, Boonsripitayanon M, Glisson BS, Ferrarotto R, Gunn GB, Phan J, Gillenwater AM, Hanna EY. Role of induction chemotherapy for oral cavity squamous cell carcinoma. *Cancer*. 2021 Sep 1;127(17):3107-3112. doi: 10.1002/cncr.33616. Epub 2021 Apr 28. PMID: 33909292.
- 1.7. Panizza B, Warren TA, Solares CA, Boyle GM, Lambie D, Brown I. Histopathological features of clinical perineural invasion of cutaneous squamous cell carcinoma of the head and neck and the potential implications for treatment. *Head Neck*. 2014;36:1611-1618.

1. Sinonasal Undifferentiated Carcinoma

- 1.1. Gamez ME, Lal D, Halyard MY, et al. Outcomes and patterns of failure for sinonasal undifferentiated carcinoma (SNUC): The Mayo Clinic Experience. *Head Neck*. 2017 Sep; 39(9): 1819-1824. [Pubmed Link](#)
- 1.2. Khan MN, Konuthula N, Parasher A, et al. Treatment modalities in sinonasal undifferentiated carcinoma: an analysis from the national cancer database. *Int Forum Allergy Rhinol*. 2017 Feb; 7(2): 205-210. [Pubmed Link](#)
- 1.3. Kuo P, Manes RP, Schwam ZG, et al. Survival Outcomes for Combined Modality Therapy for Sinonasal Undifferentiated Carcinoma. *Otolaryngol Head Neck Surg*. 2017 Jan; 156(1): 132-136. [Pubmed Link](#)

- 1.4. Kuan EC, Arshi A, Mallen-St Clair J, et al. Significance of Tumor Stage in Sinonasal Undifferentiated Carcinoma Survival: A Population-Based Analysis. *Otolaryngol Head Neck Surg*. 2016 Apr; 154(4): 667-73. [Pubmed Link](#)
- 1.5. Morand GB, Anderegg N, Vital D, et al. Outcome by treatment modality in sinonasal undifferentiated carcinoma (SNUC): A case-series, systematic review and meta-analysis. *Oral Oncol*. 2017 Dec; 75: 28-34. [Pubmed Link](#)
- 1.6. French CA. NUT Carcinoma: Clinicopathologic features, pathogenesis, and treatment. *Pathol Int*. 2018 Nov;68(11):583-595. doi: 10.1111/pin.12727. Epub 2018 Oct 26. PMID: 30362654. [Pubmed Link](#)
- 1.7. Amit M, Abdelmeguid AS, Watcherporn T, Takahashi H et al. Induction Chemotherapy Response as a Guide for Treatment Optimization in Sinonasal Undifferentiated Carcinoma. *J Clin Oncol*. 2019; 37(6): 504-512. [Pubmed Link](#)

2. Olfactory Neuroblastoma

2.1. Skull Base Journal Club on nodal recurrence in olfactory neuroblastoma.

<https://www.ahns.info/wp-content/uploads/2020/07/Journal-Club-7-2020-vol-32.pdf>

- 2.1.1. Kuan EC, Nasser HB, Carey R, Met al. A Population-Based Analysis of Nodal Metastases in Esthesioneuroblastomas of the Sinonasal Tract. *Laryngoscope* 2019; 129:1025-1029.
- 2.1.2. Konuthula N, Illoreta AM, Miles B et al. Prognostic significance of Kadish staging in esthesioneuroblastoma: An analysis of the National Cancer Database. *Head Neck* 2017; 39:1962-1968.
- 2.1.3. Marinelli JP, Janus JR, Van Gompel J et al. Dural Invasion Predicts the Laterality and Development of Neck Metastases in Esthesioneuroblastoma. *J Neurol Surg B Skull Base* 2018; 79:495-500.
- 2.1.4. Nalavenkata SB, Sacks R, Adappa N et al. Olfactory Neuroblastoma: Fate of the Neck-- A Long-term Multicenter Retrospective Study. *Otolaryngol Head Neck Surg* 2016; 154:383-389. 6. Banuchi VE, Dooley L, Lee NY et al. Patterns of regional and distant metastasis in esthesioneuroblastoma. *Laryngoscope* 2016; 126:1556-1561.
- 2.1.5. Jiang W, Mohamed ASR, Fuller C et al. The role of elective nodal irradiation for esthesioneuroblastoma patients with clinically negative neck. *Pract Radiat Oncol* 2016; 6:241-247
- 2.2. Bell D, Saade R, Roberts D, et al. Prognostic utility of Hyams histological grading and Kadish-Morita staging systems for esthesioneuroblastoma outcomes. *Head Neck Pathol*. 2015;9(1):51-59. [Pubmed Link](#)
- 2.3. Harvey RJ, Nalavenkata S, Sacks R, Adappa ND, Palmer JN, Purkey MT, Schlosser RJ, Snyderman C, Wang EW, Woodworth BA, Smee R, Havas T, Gallagher R. Survival outcomes for stage-matched endoscopic and open resection of olfactory neuroblastoma. *Head Neck*. 2017 Dec;39(12):2425-2432. [Pubmed Link](#)
- 2.4. Fu TS, Monteiro E, Muhanna N, Goldstein DP, de Almeida JR. Comparison of outcomes for open versus endoscopic approaches for olfactory neuroblastoma: a systematic review and individual participant data meta-analysis. *Head Neck*. 2016;38(Suppl 1):E2306-E2316.
- 2.5. Patel SG, Singh B, Stambuk HE, et al. Craniofacial surgery for esthesioneuroblastoma: report of an international collaborative study. *J Neurol Surg B Skull Base*. 2012;73(3):208-220. [Pubmed Link](#)
- 2.6. Venkatramani R, Pan H, Furman WL, Marron JM, Haduong J, Friedrich-Medina P, Mahajan A, Bavle A, Wu H, Chintagumpala M. Multimodality Treatment of Pediatric Esthesioneuroblastoma. *Pediatr Blood Cancer*. 2016 Mar;63(3):465-70. doi: 10.1002/pbc.25817. Epub 2015 Oct 30. PMID: 26514449; PMCID: PMC5134836.

3. Neuroendocrine Tumors

- 3.1. Turri-Zanoni M, Maragliano R, Battaglia P, Giovannardi M, Antognoni P, Lombardi D, Morassi ML, Pasquini E, Tarchini P, Asioli S, Foschini MP, Sessa F, Nicolai P, Castelnuovo P, La Rosa S. The clinicopathological spectrum of olfactory neuroblastoma and sinonasal neuroendocrine neoplasms: Refinements in diagnostic criteria and impact of multimodal treatments on survival. *Oral Oncol.* 2017 Nov;74:21-29. PMID: 29103747.
- 3.2. van der Laan TP, Iepsma R, Witjes MJ, van der Laan BF, Plaat BE, Halmos GB. Meta-analysis of 701 published cases of sinonasal neuroendocrine carcinoma: The importance of differentiation grade in determining treatment strategy. *Oral Oncol.* 2016 Dec;63:1-9. doi: 10.1016/j.oraloncology.2016.10.002. Epub 2016 Oct 31. PMID: 27938993.
- 3.3. Rosenthal DI, Barker JL Jr, El-Naggar AK, Glisson BS, Kies MS, Diaz EM Jr, Clayman GL, Demonte F, Selek U, Morrison WH, Ang KK, Chao KS, Garden AS. Sinonasal malignancies with neuroendocrine differentiation: patterns of failure according to histologic phenotype. *Cancer.* 2004 Dec 1;101(11):2567-73. doi: 10.1002/cncr.20693. PMID: 15517582.

4. Adenoid Cystic and Minor Salivary Gland Tumors

- 4.1. INTERNATIONAL HEAD AND NECK SCIENTIFIC GROUP. Cervical lymph node metastasis in adenoid cystic carcinoma of the sinonasal tract, nasopharynx, lacrimal glands and external auditory canal: a collective international review. *J Laryngol Otol.* 2016 Dec;130(12):1093-1097. doi: 10.1017/S0022215116009373. Epub 2016 Nov 14. PMID: 27839526; PMCID: PMC5535774.
- 4.2. Amit M, Binenbaum Y, Sharma K, Ramer N, Ramer I, Agbetoba A, Miles B, Yang X, Lei D, Bjoerndal K, Godballe C, Mücke T, Wolff KD, Fliss D, Eckardt AM, Copelli C, Sesenna E, Palmer F, Patel S, Gil Z. Adenoid cystic carcinoma of the nasal cavity and paranasal sinuses: a meta-analysis. *J Neurol Surg B Skull Base.* 2013 Jun;74(3):118-25. doi: 10.1055/s-0033-1347358. Epub 2013 May 15. Erratum in: *J Neurol Surg B Skull Base.* 2014 Jun;75(3):e1. Naomi, Ramer [corrected to Ramer, Naomi]; Ilana, Ramer [corrected to Ramer, Ilana]; Abib, Agbetoba [corrected to Agbetoba, Abib]; Kristine, Bjoerndal [corrected to Bjoerndal, Kristine]; Christian, Godballe [corrected to Godballe, Christian]; Thomas, Mücke. Erratum in: *J Neurol Surg B Skull Base.* 2014 Jun;75(3):e1. PMID: 24436900; PMCID: PMC3709956.
- 4.3. Unsal AA, Chung SY, Zhou AH, Baredes S, Eloy JA. Sinonasal adenoid cystic carcinoma: a population based analysis of 694 cases. *Int Forum Allergy Rhinol.* 2017;7:312-320.
- 4.4. Mays AC, Hanna EY, Ferrarotto R, Phan J, Bell D, Silver N, Mulcahy CF, Roberts D, Abdelmeguid ASA, Fuller CD, Frank SJ, Raza SM, Kupferman ME, DeMonte F, Su SY. Prognostic factors and survival in adenoid cystic carcinoma of the sinonasal cavity. *Head Neck.* 2018 Dec;40(12):2596-2605. doi: 10.1002/hed.25335. Epub 2018 Nov 17. PMID: 30447126.

5. Chemotherapy

- 5.1. Bossi P, Saba NF, Vermorken JB, Strojan P, Pala L, de Bree R, Rodrigo JP, Lopez F, Hanna EY, Haigentz M, Takes RP, Slootweg PJ, Silver CE, Rinaldo A, Ferlito A. The role of systemic therapy in the management of sinonasal cancer: A critical review. *Cancer Treat Rev.* 2015 Dec;41(10):836-43. doi: 10.1016/j.ctrv.2015.07.004. Epub 2015 Jul 31. PMID: 26255226.
- 5.2. Houry T, Jang D, Carrau R, Ready N, Barak I, Hachem RA. Role of induction chemotherapy in sinonasal malignancies: a systematic review. *Int Forum Allergy Rhinol.* 2019 Feb;9(2):212-219. doi: 10.1002/alr.22229. Epub 2018 Nov 9. PMID: 30411867.

6. Endoscopic Surgery Results

- 6.1. Nicolai P, Battaglia P, Bignami M, Bolzoni Villaret A, Delù G, Khrais T, Lombardi D, Castelnuovo P. Endoscopic surgery for malignant tumors of the sinonasal tract and adjacent skull base: a 10-year experience. *Am J Rhinol*. 2008 May-Jun;22(3):308-16. doi: 10.2500/ajr.2008.22.3170. PMID: 18588765.
- 6.2. Kaplan DJ, Kim JH, Wang E, Snyderman C. Prognostic Indicators for Salvage Surgery of Recurrent Sinonasal Malignancy. *Otolaryngol Head Neck Surg*. 2016 Jan;154(1):104-12. doi: 10.1177/0194599815606699. Epub 2015 Sep 30. PMID: 26424747.
- 6.3. Abdelmeguid AS, Raza SM, Su SY, Kupferman M, Roberts D, DeMonte F, Hanna EY. Endoscopic resection of sinonasal malignancies. *Head Neck*. 2020 Apr;42(4):645-652. doi: 10.1002/hed.26047. Epub 2019 Dec 24. PMID: 31875340.
- 6.4. Reyes C, Mason E, Solares CA, Bush C, Carrau R. To preserve or not to preserve the orbit in paranasal sinus neoplasms: a meta-analysis. *J Neurol Surg B Skull Base*. 2015;76(2):122-128. [Pubmed Link](#)

7. Pathology and Molecular Considerations

- 7.1. Stelow EB, Bishop JA. Update from the 4th Edition of the World Health Organization Classification of Head and Neck Tumours: Tumors of the Nasal Cavity, Paranasal Sinuses and Skull Base. *Head Neck Pathol*. 2017 Mar;11(1):3-15. doi: 10.1007/s12105-017-0791-4. Epub 2017 Feb 28. PMID: 28247233; PMCID: PMC5340732. [Pubmed Link](#)
- 7.2. Hermsen MA, Riobello C, García-Marín R, Cabal VN, Suárez-Fernández L, López F, Llorente JL. Translational genomics of sinonasal cancers. *Semin Cancer Biol*. 2020 Apr;61:101-109. doi: 10.1016/j.semcancer.2019.09.016. Epub 2019 Sep 24. PMID: 31560943.
- 7.3. Choi KY, Amit M, Tam S, Bell D, Phan J, Garden AS, Williams MD, Ferrarotto R, El-Naggar AK, Raza SM, DeMonte F, Kupferman ME, Hanna EY, Su SY. Clinical Implication of Diagnostic and Histopathologic Discrepancies in Sinonasal Malignancies. *Laryngoscope*. 2020 Sep 18. doi: 10.1002/lary.29102. Epub ahead of print. PMID: 32946597.

8. Miscellaneous

- 8.1. Hernberg S, Westerholm P, Schultz-Larsen K, et al. Nasal and sinonasal cancer. Connection with occupational exposures in Denmark, Finland and Sweden. *Scand J Work Environ Health*. 1983;9:315-26. [Pubmed Link](#)
- 8.2. Warren TA, Nagle CM, Bowman J, Panizza BJ. The natural history and treatment outcomes of perineural spread of malignancy within the head and neck. *J Neurol Surg B* 2016;77:107-112. [Pubmed Link](#)

9. Review Articles

- 9.1. Byrd JK, Clair JM, El-Sayed I. AHNS Series: Do you know your guidelines? Principles for treatment of cancer of the paranasal sinuses: A review of the National Comprehensive Cancer Network guidelines. *Head Neck* 2018; 40:1889-1896. [Pubmed Link](#)
- 9.2. Eloy JA, Setzen M, Liu JK (eds). Sinonasal and ventral skull base malignancies. *Otolaryngol Clin North Am*. 2017 Apr;50(2):205-504. [Pubmed Link](#)

10. Classic Articles: Open Surgery Results

- 10.1. Gil Z, Fliss DM, Cavel O, Shah JP, Kraus DH. Improvement in survival during the past 4 decades among patients with anterior skull base cancer. *Head Neck*. 2012 Sep;34(9):1212-7. doi: 10.1002/hed.21886. Epub 2011 Nov 11. PMID: 22076799.

- 10.2.** Ganly I, Patel SG, Singh B, Kraus DH, Bridger PG, Cantu G, Cheesman A, De Sa G, Donald P, Fliss DM, Gullane P, Janecka I, Kamata SE, Kowalski LP, Levine PA, Medina Dos Santos LR, Pradhan S, Schramm V, Snyderman C, Wei WI, Shah JP. Craniofacial resection for malignant paranasal sinus tumors: Report of an International Collaborative Study. *Head Neck*. 2005 Jul;27(7):575-84. [Pubmed Link](#)
- 10.3.** Dulguerov P, Jacobsen MS, Allal AS, Lehmann W, Calcaterra T. Nasal and paranasal sinus carcinoma: are we making progress? A series of 220 patients and a systematic review. *Cancer*. 2001 Dec 15;92(12):3012-29. doi: 10.1002/1097-0142(20011215)92:12<3012::aid-cncr10131>3.0.co;2-e. PMID: 11753979.