

BÖLÜM 1

NAZOFARENKS KANSERİNE YAKLAŞIM



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EPİDEMİYOLOJİ

Nazofarengial karsinom (NFK) dünya çapında nadir görülen bir malignitedir, Güney Çin, Güneydoğu Asya, Kuzey Afrika ve Kuzey Kutbu dahil olmak üzere birkaç bölgede endemiktir. Bu özellikle coğrafi dağılımın neden olduğu konusu, belirsizliğini korumaktadır (1).

NFK'nin dünya genelinde yeni olgu kanser vakaları 2018 Küresel Kanser İstatistiklerine göre; yaşa göre standardize edilmiş oran ile (ASR) erkeklerde 100.000'de 2,2 ve kadınlarda 100.000'de 0,8'dir (2). Çin'de 2015 yılında her iki cinsiyette 60.000 yeni NFK vaka ve NFK nedeniyle 34.000 ölüm bildirilmiştir (3).

Yapılan bir çalışmada, başta Beş Kitada Kanser İnsidansı (CI5) verileri ve Dünya Sağlık Örgütü (WHO) kanser ölüm veri tabanı olmak üzere birden çok farklı kaynaktan insidans (1970–2007) ve mortalite (1970–2013) araştırması yapıldığı bildirilmiştir. Bu araştırmaya göre, incelenen tüm dönemler boyunca, NFK'nin yaşa göre standardize edilmiş insidans oranları (ASIRs) Güney ve Doğu Asya, Kuzey Amerika ve Kuzey ülkelerinde ortalama yıllık insidansları değişiklikleri (AAPC'ler) erkeklerde %0.9 ila -5.4 oranında, kadınlarda %1.1 -%4.1 oranında azalma gösterdiği tespit edilmiştir. Yaşa göre standardize edilmiş ölüm oranla-

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KAYNAKLAR

1. Wu L, Li C, Pan L. Nasopharyngeal carcinoma: A review of current updates. Experimental and therapeutic medicine. 2018;15 (4):3687-92.
2. Ferlay J, Colombet M, Soerjomataram I, et al. Estimating the global cancer incidence and mortality in 2018: GLOBOCAN sources and methods. International journal of cancer. 2019;144 (8):1941-53.
3. Chen W, Zheng R, Baade PD, et al. Cancer statistics in China, 2015. CA: a cancer journal for clinicians. 2016;66 (2):115-32.
4. Tang L-L, Chen W-Q, Xue W-Q, et al. Global trends in incidence and mortality of nasopharyngeal carcinoma. Cancer letters. 2016;374 (1):22-30.
5. Ma BB, Hui EP, Chan AT. Investigational drugs for nasopharyngeal carcinoma. Expert opinion on investigational drugs. 2017;26 (6):677-85.
6. Feng RM, Zong YN, Cao SM, et al. Current cancer situation in China: good or bad news from the 2018 Global Cancer Statistics? Cancer communications. 2019;39 (1):1-12.
7. Wang Y, Guo Z, Zhao Y, et al. Genetic polymorphisms of lncRNA-p53 regulatory network genes are associated with concurrent chemoradiotherapy toxicities and efficacy in nasopharyngeal carcinoma patients. Scientific reports. 2017;7 (1):1-10.
8. Lin Z, Khong B, Kwok S, et al. Human papillomavirus 16 detected in nasopharyngeal carcinomas in white Americans but not in endemic Southern Chinese patients. Head & neck. 2014;36 (5):709-14.
9. Shanmugaratnam K, Sabin LH. The World Health Organization histological classification of tumours of the upper respiratory tract and ear. A commentary on the second edition. Cancer. 1993;71 (8):2689-97.
10. Lo KW, To KF, Huang DP. Focus on nasopharyngeal carcinoma. Cancer cell. 2004;5 (5):423-8.
11. Marks JE, Phillips JL, Menck HR. The National Cancer Data Base report on the relationship of race and national origin to the histology of nasopharyngeal carcinoma. Cancer: Interdisciplinary International Journal of the American Cancer Society. 1998;83 (3):582-8.
12. Chua ML, Wee JT, Hui EP, et al. Nasopharyngeal carcinoma. The Lancet. 2016;387 (10022):1012-24.
13. Shao JY, Li YH, Gao HY, et al. Comparison of plasma Epstein-Barr virus (EBV) DNA levels and serum EBV immunoglobulin A/virus capsid antigen antibody titers in patients with nasopharyngeal carcinoma. Cancer: Interdisciplinary International Journal of the American Cancer Society. 2004;100 (6):1162-70.
14. Tang L, Mao Y, Liu L, et al. The volume to be irradiated during selective neck irradiation in nasopharyngeal carcinoma: analysis of the spread patterns in lymph nodes by magnetic resonance imaging. Cancer. 2009;115 (3):680-8.
15. Lai V, Khong PL. Updates on MR imaging and 18F-FDG PET/CT imaging in nasopharyngeal carcinoma. Oral oncology. 2014;50 (6):539-48.
16. Lee AW, Poon YF, Foo W, et al. Retrospective analysis of 5037 patients with nasopharyngeal carcinoma treated during 1976-1985: overall survival and patterns of failure. International journal of radiation oncology, biology, physics. 1992;23 (2):261-70. PubMed PMID: 1587745. Epub 1992/01/01. eng.
17. Farias TP, Dias FL, Lima RA, et al. Prognostic factors and outcome for nasopharyngeal carcinoma. Archives of Otolaryngology-Head & Neck Surgery. 2003;129 (7):794-9.



18. Pan X-X, Tong L-H, Chen Y-F, et al. A simplified T classification based on the 8th edition of the UICC/AJCC staging system for nasopharyngeal carcinoma. *Cancer management and research.* 2019;11:3163.
19. Pan JJ, Ng WT, Zong JF, et al. Proposal for the 8th edition of the AJCC/UICC staging system for nasopharyngeal cancer in the era of intensity-modulated radiotherapy. *Cancer.* 2016;122 (4):546-58.
20. Lydiatt WM, Patel SG, O'Sullivan B, et al. Head and neck cancers—major changes in the American Joint Committee on cancer eighth edition cancer staging manual. *CA: a cancer journal for clinicians.* 2017;67 (2):122-37.
21. Wang HY, Chang YL, To KF, et al. A new prognostic histopathologic classification of nasopharyngeal carcinoma. *Cancer Communications.* 2016;35 (1):1-16.
22. Lam WJ, Chan JY. Recent advances in the management of nasopharyngeal carcinoma. *F1000Research.* 2018;7.
23. Tham IW-K, Hee SW, Yeo RM-C, et al. Treatment of nasopharyngeal carcinoma using intensity-modulated radiotherapy—the National Cancer Centre Singapore experience. *International Journal of Radiation Oncology* Biology* Physics.* 2009;75 (5):1481-6.
24. Bian X, Chen H, Liao L. A retrospective study of salvage surgery for recurrent nasopharyngeal carcinoma. *International journal of clinical oncology.* 2012;17 (3):212-7.
25. Vlantis AC, Lee DL, Wong EW, et al. Endoscopic nasopharyngectomy in recurrent nasopharyngeal carcinoma: a case series, literature review, and pooled analysis. *International Forum of Allergy & Rhinology;* 2017: Wiley Online Library.
26. Tao C-J, Lin L, Zhou G-Q, et al. Comparison of long-term survival and toxicity of cisplatin delivered weekly versus every three weeks concurrently with intensity-modulated radiotherapy in nasopharyngeal carcinoma. *PloS one.* 2014;9 (10):e110765.
27. Chen Y, Wang Z, Chen L, et al. A Bayesian network meta-analysis comparing concurrent chemoradiotherapy followed by adjuvant chemotherapy, concurrent chemoradiotherapy alone and radiotherapy alone in patients with locoregionally advanced nasopharyngeal carcinoma. *Annals of oncology.* 2015;26 (1):205-11.
28. Lee AW, Ngan RK, Tung SY, et al. Preliminary results of trial NPC-0501 evaluating the therapeutic gain by changing from concurrent-adjuvant to induction-concurrent chemoradiotherapy, changing from fluorouracil to capecitabine, and changing from conventional to accelerated radiotherapy fractionation in patients with locoregionally advanced nasopharyngeal carcinoma. *Cancer.* 2015;121 (8):1328-38.
29. Wang WY, Twu CW, Chen HH, et al. Long-term survival analysis of nasopharyngeal carcinoma by plasma Epstein-Barr virus DNA levels. *Cancer.* 2013;119 (5):963-70.
30. Tian Y, Tian Y, Zeng L, et al. Prognostic model for survival of local recurrent nasopharyngeal carcinoma with intensity-modulated radiotherapy. *British journal of cancer.* 2014;110 (2):297-303.
31. Chan JYW, Chow VLY, Wong STS, et al. Surgical salvage for recurrent retropharyngeal lymph node metastasis in nasopharyngeal carcinoma. *Head & Neck.* 2013;35 (12):1726-31.
32. Leong SS, Wee J, Tay MH, et al. Paclitaxel, carboplatin, and gemcitabine in metastatic nasopharyngeal carcinoma: a Phase II trial using a triplet combination. *Cancer.* 2005;103 (3):569-75.
33. Chan KA, Woo JK, King A, et al. Analysis of plasma Epstein-Barr virus DNA to screen for nasopharyngeal cancer. *New England Journal of Medicine.* 2017;377 (6):513-22.
34. Coghill AE, Pfeiffer RM, Proietti C, et al. Identification of a novel, EBV-based antibody risk stratification signature for early detection of nasopharyngeal carcinoma in Taiwan. *Clinical Cancer Research.* 2018;24 (6):1305-14.



35. Chan AT, Hsu M-M, Goh BC, et al. Multicenter, phase II study of cetuximab in combination with carboplatin in patients with recurrent or metastatic nasopharyngeal carcinoma. *Journal of clinical oncology*. 2005;23 (15):3568-76.
36. Hui E, Ma B, King A, et al. Hemorrhagic complications in a phase II study of sunitinib in patients of nasopharyngeal carcinoma who has previously received high-dose radiation. *Annals of oncology*. 2011;22 (6):1280-7.
37. Louis CU, Straathof K, Bollard CM, et al. Adoptive transfer of EBV-specific T cells results in sustained clinical responses in patients with locoregional nasopharyngeal carcinoma. *Journal of immunotherapy (Hagerstown, Md: 1997)*. 2010;33 (9):983.
38. Smith C, Tsang J, Beagley L, et al. Effective treatment of metastatic forms of Epstein-Barr virus-associated nasopharyngeal carcinoma with a novel adenovirus-based adoptive immunotherapy. *Cancer research*. 2012;72 (5):1116-25.
39. Fang W, Zhang J, Hong S, et al. EBV-driven LMP1 and IFN- γ up-regulate PD-L1 in nasopharyngeal carcinoma: Implications for oncotargeted therapy. *Oncotarget*. 2014;5 (23):12189.
40. Sarisahin M, Cila A, Ozyar E, et al. Prognostic significance of tumor volume in nasopharyngeal carcinoma. *Auris Nasus Larynx*. 2011;38 (2):250-4.
41. Shen C, Lu JJ, Gu Y, et al. Prognostic impact of primary tumor volume in patients with nasopharyngeal carcinoma treated by definitive radiation therapy. *The Laryngoscope*. 2008;118 (7):1206-10.
42. Tang L, Chen Q, Guo S, et al. The impact of plasma Epstein-Barr virus DNA and fibrinogen on nasopharyngeal carcinoma prognosis: an observational study. *British journal of cancer*. 2014;111 (6):1102-11.
43. Chen W-H, Tang L-Q, Wang F-W, et al. Elevated levels of plasma D-dimer predict a worse outcome in patients with nasopharyngeal carcinoma. *BMC cancer*. 2014;14 (1):1-11.
44. Tang L-Q, Li C-F, Chen Q-Y, et al. High-sensitivity C-reactive protein complements plasma Epstein-Barr virus deoxyribonucleic acid prognostication in nasopharyngeal carcinoma: a large-scale retrospective and prospective cohort study. *International Journal of Radiation Oncology* Biology* Physics*. 2015;91 (2):325-36.