

Memenin Malign Hastalıkları

Bölüm 37

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Ana Konular

- ▶ Epidemiyoloji
- ▶ Risk Faktörleri
- ▶ Klinik Özellikler
- ▶ Histoloji ve Evreleme
- ▶ Ayırıcı Tanı
- ▶ Meme Kanseri Taraması
- ▶ Meme Kanseri Tedavisi
- ▶ Meme Kanserinde Özel Durumlar

EPİDEMİYOLOJİ

Meme kanseri dünya genelinde kadınlarda en sık görülen malign hastalıktır. Dünya Sağlık Örgütü, 2018 için 2.088.849 yeni meme kanseri ve 626.679 meme kanserine bağlı ölüm öngörmektedir. Bu veriler ile meme kanseri kadınlarda kansere bağlı ölümlerde ilk sıraya yerleşmektedir. İnsidans dünyanın farklı coğrafyalarında değişiklik göstermekte olup, insani gelişim endeksi yüksek veya çok yüksek olan bölgelerde 54.4, düşük veya çok düşük olanlarda ise 31.3 olarak öngörülürken, genel olarak yaş standardize oran 46.3'tür. Kadınlarda doğum ile 74 yaş arası kümülatif risk ise %5.03 olarak bildirilmektedir. İnsidans oranları; Kuzey Amerika, Avusturalya/Yeni Zelanda ve Batı-Kuzey Avrupa'da en yüksek, Asya ve Sahara altı Afrika'da ise en düşüktür. Mortalite için yaş standardize oran %13, kümülatif risk ise %1.41'dir.

Genetik ve herediter faktörler, meme kanserinin %5-10'undan sorumlu tutulmakla birlikte uluslararası ve etnik gruplar arası insidans farkında herediter olmayan faktörlerin temel belirleyici olduğu düşünülmektedir. Düşük riskli popülasyonun yüksek

riskli popülasyon bölgelerine göç etmesi durumunda meme kanseri insidans oranlarının sonraki jenerasyonlarda arttığı görülmüştür. Yüksek insani gelişim endeksine sahip ülkelerdeki yüksek insidans menstruasyon, reproduksiyon, eksojen hormon tüketimi, beslenme, antropometri ve benzeri bilinen risk faktör prevalansının yüksek olmasına atfedilmektedir.

Amerika Birleşik Devletleri, Kanada, İngiltere, Fransa ve Avusturalya gibi bazı gelişmiş ülkelerde 2000'li yılların başında insidansın azalması postmenapozal hormon replasman tedavisi kullanımındaki azalmaya kısmen bağlanabilir. Meme kanseri için birincil risk faktörleri değiştirilebilir olmayıp, uzun süreli endojen hormona maruziyete bağlı olmakla birlikte uzun süreli emzirmenin artırılması önlem anlamında faydalı olabilir. Türkiye İstatistik Kurumu verilerine göre yıllık yeni meme kanseri sayısı yaklaşık 17.000 olup yaşa göre standardize hız 43/100.000'dir. Türkiye'de de kadınlarda en sık görülen kanser türü olan meme kanseri, kadınlarda görülen kanserlerin %25'ini oluşturmaya devam etmektedir. Türkiye'de meme kanseri insidansının son 20 yıl içinde yaklaşık iki kat artış gösterdiği

Kaynaklar

- Bray F, Ferlay J, Soerjomataram I, Siegel RL, Torre LA, Jemal A. Global cancer statistics 2018: GLOBOCAN estimates of incidence and mortality worldwide for 36 cancers in 185 countries. *CA Cancer J Clin*. 2018 Nov;68(6):394-424. doi: 10.3322/caac.21492.
- Ziegler RG, Hoover RN, Pike MC, et al. Migration patterns and breast cancer risk in Asian-American women. *J Natl Cancer Inst*. 1993;85:1819-1827.
- Brinton LA, Gaudet MM, Gierach GL. Breast cancer. In: Thun MJ, Linet MS, Cerhan JR, Haiman CA, Schottenfeld D, eds. *Cancer Epidemiology and Prevention*. 4th ed. New York: Oxford University Press; 2018:861-888.
- Rossouw JE, Anderson GL, Prentice RL, et al. Risks and benefits of estrogen plus progestin in healthy postmenopausal women: principal results from the Women's Health Initiative randomized controlled trial. *JAMA* 2002;288:321-333.
- Ravdin PM, Cronin KA, Howlander N, et al. The decrease in breast-cancer incidence in 2003 in the United States. *N Engl J Med*. 2007;356:1670-1674.
- www.tuik.gov.tr - <https://hsgm.saglik.gov.tr>
- Siegel RL, Miller KD, Jemal A. *Cancer Statistics, 2017*. *CA Cancer J Clin* 2017; 67:7.
- Kohler BA, Ward E, McCarthy BJ, et al. Annual report to the nation on the status of cancer, 1975-2007, featuring tumors of the brain and other nervous system. *J Natl Cancer Inst* 2011; 103:714.
- Centers for Disease Control and Prevention (CDC). Vital signs: racial disparities in breast cancer severity--United States, 2005-2009. *MMWR Morb Mortal Wkly Rep* 2012; 61:922.
- Eliassen AH, Colditz GA, Rosner B, et al. Adult weight change and risk of postmenopausal breast cancer. *JAMA* 2006; 296:193.
- Key TJ, Appleby PN, Reeves GK, et al. Body mass index, serum sex hormones, and breast cancer risk in postmenopausal women. *J Natl Cancer Inst* 2003; 95:1218.
- Green J, Cairns BJ, Casabonne D, et al. Height and cancer incidence in the Million Women Study: prospective cohort, and meta-analysis of prospective studies of height and total cancer risk. *Lancet Oncol* 2011; 12:785.
- Ritte R, Lukanova A, Tjønneland A, et al. Height, age at menarche and risk of hormone receptor-positive and -negative breast cancer: a cohort study. *Int J Cancer* 2013; 132:2619.
- Missmer SA, Eliassen AH, Barbieri RL, Hankinson SE. Endogenous estrogen, androgen, and progesterone concentrations and breast cancer risk among postmenopausal women. *J Natl Cancer Inst* 2004; 96:1856.
- Fortner RT, Eliassen AH, Spiegelman D, et al. Premenopausal endogenous steroid hormones and breast cancer risk: results from the Nurses' Health Study II. *Breast Cancer Res* 2013; 15:R19.
- London SJ, Connolly JL, Schnitt SJ, Colditz GA. A prospective study of benign breast disease and the risk of breast cancer. *JAMA* 1992; 267:941.
- Boyd NF, Guo H, Martin LJ, et al. Mammographic density and the risk and detection of breast cancer. *N Engl J Med* 2007; 356:227.
- Zmuda JM, Cauley JA, Ljung BM, et al. Bone mass and breast cancer risk in older women: differences by stage at diagnosis. *J Natl Cancer Inst* 2001; 93:930.
- M. Clemons M, Goss P. *Estrogen and the risk of breast cancer*. *N Engl J Med* 2001; 344:276.
- Hsieh CC, Trichopoulos D, Katsouyanni K, Yuasa S. Age at menarche, age at menopause, height and obesity as risk factors for breast cancer: associations and interactions in an international case-control study. *Int J Cancer* 1990; 46:796.
- Breast cancer and hormone replacement therapy: collaborative reanalysis of data from 51 epidemiological studies of 52,705 women with breast cancer and 108,411 women without breast cancer. Collaborative Group on Hormonal Factors in Breast Cancer. *Lancet* 1997; 350:1047.
- Colditz GA, Rosner B. Cumulative risk of breast cancer to age 70 years according to risk factor status: data from the Nurses' Health Study. *Am J Epidemiol* 2000; 152:950.
- Collaborative Group on Hormonal Factors in Breast Cancer. Familial breast cancer: collaborative reanalysis of individual data from 52 epidemiological studies including 58,209 women with breast cancer and 101,986 women without the disease. *Lancet* 2001; 358:1389.
- Gram IT, Park SY, Kolonel LN, et al. Smoking and Risk of Breast Cancer in a Racially/Ethnically Diverse Population of Mainly Women Who Do Not Drink Alcohol: The MEC Study. *Am J Epidemiol* 2015; 182:917.
- Shiftwork. IARC Monographs Volume 98. <http://monographs.iarc.fr/ENG/Monographs/vol98/mono98-8.pdf> (Accessed on November 01, 2012).

- Megdal SP, Kroenke CH, Laden F, et al. Night work and breast cancer risk: a systematic review and meta-analysis. *Eur J Cancer* 2005; 41:2023.
- Henderson TO, Amsterdam A, Bhatia S, et al. Systematic review: surveillance for breast cancer in women treated with chest radiation for childhood, adolescent, or young adult cancer. *Ann Intern Med* 2010; 152:444.
- Collaborative Group on Hormonal Factors in Breast Cancer. Breast cancer and breastfeeding: collaborative reanalysis of individual data from 47 epidemiological studies in 30 countries, including 50302 women with breast cancer and 96973 women without the disease. *Lancet* 2002; 360:187.
- Lynch BM, Neilson HK, Friedenreich CM. Physical activity and breast cancer prevention. *Recent Results Cancer Res* 2011; 186:13.
- Morrow M. The evaluation of common breast problems. *Am Fam Physician* 2000; 61:2371.
- Cady, B, Steele, GD, Morrow, M. Evaluation of Common Breast Problems: A Primer for Primary Care Providers; prepared by the Society of Surgical Oncology and the Commission on Cancer of the American College of Surgeons for the Centers for Disease Control and Prevention, Publication no. 633-001/20900, US Department of Health and Human Services, 1998. www.utmb.edu/Surgery/clerks/primer.htm
- Rimsten A, Stenkvist B, Johanson H, Lindgren A. The diagnostic accuracy of palpation and fine-needle biopsy and an evaluation of their combined use in the diagnosis of breast lesions: report on a prospective study in 1244 women with symptoms. *Ann Surg* 1975; 182:1.
- van Dam PA, Van Goethem ML, Kersschot E, et al. Palpable solid breast masses: retrospective single- and multimodality evaluation of 201 lesions. *Radiology* 1988; 166:435.
- Li CI, Uribe DJ, Daling JR. Clinical characteristics of different histologic types of breast cancer. *Br J Cancer* 2005; 93:1046.
- Dillon DA, Guidi AJ, Schnitt SJ. Pathology of invasive breast cancer. In: Diseases of the Breast, 4th, Harris JR, Lippman ME, Morrow M, Osborne CK (Eds), Lippincott, Williams and Wilkins, Philadelphia 2009. p.386.
- Blanpain C. Tracing the cellular origin of cancer. *Nat Cell Biol* 2013; 15:126.
- National Comprehensive Cancer Network (NCCN). NCCN Clinical practice guidelines in oncology. https://www.nccn.org/professionals/physician_gls/pdf/neuroendocrine.pdf (Erişim Temmuz 22, 2018).
- Stomper PC, Winston PS, Proulx GM, et al. Mammographic detection and staging of ductal carcinoma in situ: mammographic-pathologic correlation. *Semin Breast Dis* 2000; 3:1.
- Healey EA, Osteen RT, Schnitt SJ, et al. Can the clinical and mammographic findings at presentation predict the presence of an extensive intraductal component in early stage breast cancer? *Int J Radiat Oncol Biol Phys* 1989; 17:1217.
- AJCC (American Joint Committee on Cancer) Cancer Staging Manual; 8th edition, 3rd printing, Amin MB, Edge SB, Greene FL, et al (Eds), Springer, Chicago 2018.
- Vaidya JS, Vyas JJ, Thakur MH, et al. Role of ultrasonography to detect axillary node involvement in operable breast cancer. *Eur J Surg Oncol* 1996; 22:140.
- Lanng C, Hoffmann J, Galatius H, Engel U. Assessment of clinical palpation of the axilla as a criterion for performing the sentinel node procedure in breast cancer. *Eur J Surg Oncol* 2007; 33:281.
- Oeffinger KC, Fontham ET, Etzioni R, et al; American Cancer Society. Breast Cancer Screening for Women at Average Risk: 2015 Guideline Update From the American Cancer Society. *JAMA*. 2015;314(15):1599-614. doi: 10.1001/jama.2015.12783.
- Howlander N, Noone A, Krapcho M, et al. *SEER Cancer Statistics Review, 1975-2014*. Bethesda, MD: National Cancer Institute; 2017.
- Welch HG, Prorok PC, O'Malley AJ, Kramer BS. Breast-Cancer Tumor Size, Overdiagnosis, and Mammography Screening Effectiveness. *N Engl J Med* 2016; 375:1438.
- Bleyer A, Welch HG. Effect of three decades of screening mammography on breast-cancer incidence. *N Engl J Med* 2012; 367:1998.
- Pisano ED, Hendrick RE, Yaffe MJ, et al. Diagnostic accuracy of digital versus film mammography: exploratory analysis of selected population subgroups in DMIST. *Radiology* 2008; 246:376.
- van Ravesteyn NT, Miglioretti DL, Stout NK, et al. Tipping the balance of benefits and harms to favor screening mammography starting at age 40 years: a comparative modeling study of risk. *Ann Intern Med* 2012; 156:609.

- Kolb TM, Lichy J, Newhouse JH. Comparison of the performance of screening mammography, physical examination, and breast US and evaluation of factors that influence them: an analysis of 27,825 patient evaluations. *Radio-logy* 2002;225(1):165–175
- Orel SG, Schnall MD. MR imaging of the breast for the detection, diagnosis, and staging of breast cancer. *Radiology* 2001; 220:13-30. 197.
- Morris EA, Lieberman L, Balon DJ, Robson M, Abramson AF, Heerd A, et al. MRI of occult breast carcinoma in the high risk population. *AJR Am J Roentgenol* 2003; 181:619.
- Siu AL, U.S. Preventive Services Task Force. Screening for Breast Cancer: U.S. Preventive Services Task Force Recommendation Statement. *Ann Intern Med* 2016; 164:279.
- Canadian Task Force on Preventive Health Care, Tonelli M, Connor Gorber S, et al. Recommendations on screening for breast cancer in average-risk women aged 40-74 years. *CMAJ* 2011; 183:1991.
- NHS England Department of Health. Public health functions to be exercised by NHS England. Public Health Policy and Strategy Unit, Department of Health 2013. www.gov.uk/government/uploads/system/uploads/attachment_data/file/192971/S7A_VARIATION_2013-14_FINAL_130417.pdf (Accessed August 17, 2015).
- RACGP. Guidelines for preventive activities in general practice, breast cancer. www.racgp.org.au/your-practice/guidelines/redbook/9-early-detection-of-cancers/93-breast-cancer/.
- American College of Obstetricians-Gynecologists. Practice bulletin no. 179: Breast cancer risk assessment and screening in average-risk women. *Obstet Gynecol* 2017;130:e1-16
- Wilt TJ, Harris RP, Qaseem A, High Value Care Task Force of the American College of Physicians. Screening for Cancer: advice for high-value care from the American College of Physicians. *Ann Intern Med* 2015; 162:718.
- American Academy of Family Physicians. Clinical Preventive Service Recommendation: Breast Cancer. www.aafp.org/patient-care/clinical-recommendations/all/breast-cancer.html.
- Mainiero MB, Lourenco A, Mahoney MC, et al. ACR Appropriateness Criteria Breast Cancer Screening. *J Am Coll Radiol* 2013; 10:11.
- NCCN. NCCN Clinical Practice Guidelines in Oncology: Breast Cancer Screening and Diagnosis. Fort Washington, PA 2017.
- The Japanese Guidelines for Breast Cancer Screening. Chisato Hamashima* on behalf of the Japanese Research Group for the Development of Breast Cancer Screening Guidelines. *Japanese Journal of Clinical Oncology*, 2016, 46(5) 482–492 doi: 10.1093/jjco/hyw008
- Fisher B, Jeong JH, Anderson S, Bryant J, Fisher ER, Wolmark N. Twenty-five-year follow-up of a randomized trial comparing radical mastectomy, total mastectomy, and total mastectomy followed by irradiation. *N Engl J Med*. 2002;347(8):567-75.
- Fisher B, Anderson S, Bryant J, et al. Twenty-year follow-up of a randomized trial comparing total mastectomy, lumpectomy, and lumpectomy plus irradiation for the treatment of invasive breast cancer. *N Engl J Med* 2002; 347:1233.
- Veronesi U, Cascinelli N, Mariani L, et al. Twenty-year follow-up of a randomized study comparing breast-conserving surgery with radical mastectomy for early breast cancer. *N Engl J Med* 2002; 347:1227.
- van Maaren MC, de Munck L, de Bock GH, et al. 10 year survival after breast-conserving surgery plus radiotherapy compared with mastectomy in early breast cancer in the Netherlands: a population-based study. *Lancet Oncol* 2016; 17:1158.
- Agarwal S, Pappas L, Neumayer L, et al. Effect of breast conservation therapy vs mastectomy on disease-specific survival for early-stage breast cancer. *JAMA Surg* 2014; 149:267.
- Association of Breast Surgery at BASO1; Association of Breast Surgery at BAPRAS; Training Interface Group in Breast Surgery, Baildam A, Bishop H, Boland G, Dalgligh M, Davies L, Fatah F, Gooch H, Harcourt D, Martin L, Rainsbury D, Rayter Z, Sheppard C, Smith J, Weiler-Mithoff E, Winstanley J, Church J. *Oncoplastic breast surgery--a guide to good practice*. *Eur J Surg Oncol*. 2007 Aug;33 Suppl 1:S1-23.
- Waljee JF, Hu ES, Ubel PA, Smith DM, Newman LA, Alderman AK. Effect of esthetic outcome after breast-conserving surgery on psychosocial functioning and quality of life. *J Clin Oncol*. 2008;26(20):3331–3337.
- Clough KB, Kaufman GJ, Nos C, et al. Improving breast cancer surgery: a classification and quadrant per quadrant atlas for oncoplastic surgery. *Ann Surg Oncol* 2010; 17:1375.
- Halsted WS. I. The Results of Radical Operations for the

- Cure of Carcinoma of the Breast. *Ann Surg* 1907; 46:1.
- Simmons RM, Adamovich TL. Skin-sparing mastectomy. *Surg Clin North Am* 2003; 83:885.
- Lanitis S, Tekkis PP, Sgourakis G, et al. Comparison of skin-sparing mastectomy versus non-skin-sparing mastectomy for breast cancer: a meta-analysis of observational studies. *Ann Surg* 2010; 251:632.
- Peled AW, Irwin CS, Hwang ES, et al. Total skin-sparing mastectomy in BRCA mutation carriers. *Ann Surg Oncol* 2014; 21:37.
- Chung AP, Sacchini V. Nipple-sparing mastectomy: where are we now? *Surg Oncol* 2008; 17:261.
- Giuliano AE, Hunt KK, Ballman KV, et al. Axillary dissection vs no axillary dissection in women with invasive breast cancer and sentinel node metastasis: a randomized clinical trial. *JAMA* 2011; 305:569.
- EBCTCG (Early Breast Cancer Trialists' Collaborative Group), McGale P, Taylor C, et al. Effect of radiotherapy after mastectomy and axillary surgery on 10-year recurrence and 20-year breast cancer mortality: meta-analysis of individual patient data for 8135 women in 22 randomised trials. *Lancet* 2014; 383:2127.
- Colleoni M, Sun Z, Price KN, et al. Annual Hazard Rates of Recurrence for Breast Cancer During 24 Years of Follow-Up: Results From the International Breast Cancer Study Group Trials I to V. *J Clin Oncol* 2016; 34:927.
- Brewster AM, Hortobagyi GN, Broglio KR, et al. Residual risk of breast cancer recurrence 5 years after adjuvant therapy. *J Natl Cancer Inst* 2008; 100:1179.
- Anderson BO, Petrek JA, Byrd DR, et al. Pregnancy influences breast cancer stage at diagnosis in women 30 years of age and younger. *Ann Surg Oncol* 1996; 3:204.
- Reed W, Hannisdal E, Skovlund E, et al. Pregnancy and breast cancer: a population-based study. *Virchows Arch* 2003; 443:44.
- Shellock FG, Crues JV. MR procedures: biologic effects, safety, and patient care. *Radiology* 2004; 232:635.
- Ray JG, Vermeulen MJ, Bharatha A, et al. Association Between MRI Exposure During Pregnancy and Fetal and Childhood Outcomes. *JAMA* 2016; 316:952.
- Amant F, Deckers S, Van Calsteren K, et al. Breast cancer in pregnancy: recommendations of an international consensus meeting. *Eur J Cancer* 2010; 46:3158.
- Woo JC, Yu T, Hurd TC. Breast cancer in pregnancy: a literature review. *Arch Surg* 2003; 138:91.
- Amant F, Deckers S, Van Calsteren K, et al. Breast cancer in pregnancy: recommendations of an international consensus meeting. *Eur J Cancer* 2010; 46:3158.
- Siegel RL, Miller KD, Jemal A. Cancer statistics, 2018. *CA Cancer J Clin* 2018; 68:7.
- Tai YC, Domchek S, Parmigiani G, Chen S. Breast cancer risk among male BRCA1 and BRCA2 mutation carriers. *J Natl Cancer Inst* 2007; 99:1811.
- Cardoso F, Bartlett JMS, Slaets L, et al. Characterization of male breast cancer: results of the EORTC 10085/TBCRC/BIG/NABCG International Male Breast Cancer Program. *Ann Oncol* 2018; 29:405.
- Vermeulen MA, Slaets L, Cardoso F, et al. Pathological characterisation of male breast cancer: Results of the EORTC 10085/TBCRC/BIG/NABCG International Male Breast Cancer Program. *Eur J Cancer* 2017; 82:219.
- Hittmair AP, Lininger RA, Tavassoli FA. Ductal carcinoma in situ (DCIS) in the male breast: a morphologic study of 84 cases of pure DCIS and 30 cases of DCIS associated with invasive carcinoma--a preliminary report. *Cancer* 1998; 83:2139.
- Liu N, et al, Johnson KJ, Ma CX. Male breast cancer: An updated SEER data analysis. *Clin Breast Cancer* 2018.