

## BÖLÜM 24

# NEOADJUVAN KEMOTERAPİ SONRASI RADYOTERAPİ UYGULAMALARI

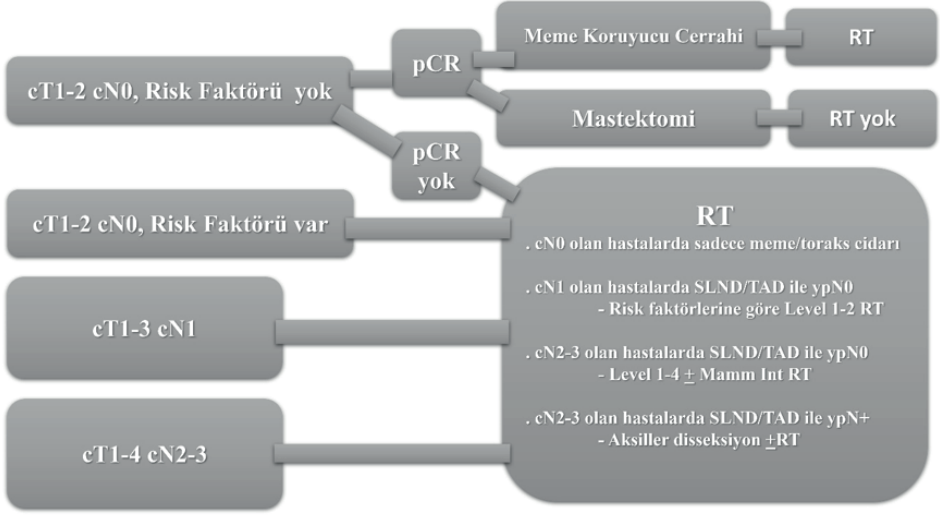
Serap YÜCEL<sup>1</sup>

### GİRİŞ

Neoadjuvan kemoterapi (NAK), ilk zamanlar tanı sırasında lokal ileri evre olan meme kanserli hastalarda cerrahiye daha kolay uygulayabilmek amacıyla ve bazı seçilmiş hastalarda meme koruyucu yaklaşımın uygulanmasına olanak sağlaması ile gündeme gelmiştir. NAK çalışmalarında cerrahi yaklaşım açısından elde edilen avantajların yanı sıra tedaviye verilen yanıtın önemli bir prognostik faktör olduğu görülmüş ve tam patolojik yanıt (pCR) elde edilmesinin sağkalım üzerine etkileri bildirilmiştir (1-3). Günümüzde NAK, seçilmiş hastalarda meme koruyucu cerrahiye mümkün kılmasının yanı sıra sentinel lenf nodunda tam yanıt elde edilen hastalarda aksiller disseksiyon yapılmadan cerrahi olma şansı yaratabilmektedir. Ayrıca erken evre meme kanserinde sistemik tedaviden fayda görecektir. submoleküler gruplar da çalışmalarda bildirilmiş ve bu hastalarda adjuvan dönemde ek tedavi gerekliliğini anlayabilmek adına NAK uygulaması yaygınlaşmıştır. Günümüzde adjuvan sistemik tedavi alacak her hasta için NAK uygulaması söz konusu olabilmektedir. NAK ile genetik danışma ve testlerin sonuçları için de zaman kazanılmış olmaktadır.

Ancak bazı hastalarda sistemik tedaviye direnç dolayısıyla da NAK ile tedavilerinde gecikme olabileceği bilinmektedir ve NAK tedavi alan hastalarda tedavi sırasında değerlendirme çok önemlidir. NAK alan hastalarda lokorejyonel tedaviler açısından oldukça farklı sonuçlar elde edilmekte, başlangıç patolojik evrenin

<sup>1</sup> Dr. Öğr. Üyesi, Acıbadem Mehmet Ali Aydınlar Üniversitesi Radyasyon Onkolojisi Bölümü  
serapbaskaya@yahoo.com



**Şekil 2:** Neoadjuvan kemoterapi sonrası radyoterapi önerileri

pCR: Patolojik tam yanıt, RT: Radyoterapi, SLND: Sentinellenf nodu disseksiyonu, TAD: Hedeflenmiş aksiller örnekleme

#### KAYNAKLAR:

1. Wolmark N, Wang J, Mamounas E, et al. Preoperative chemotherapy in patients with operable breast cancer: nine-year results from national surgical adjuvant breast and bowel project B-18. *J Natl Cancer Inst Monogr.* 2001;96-102.
2. Bear HD, Anderson S, Brown A, The effect on tumor response of adding sequential preoperative docetaxel to preoperative doxorubicin and cyclophosphamide: preliminary results from National Surgical Adjuvant Breast and Bowel Project Protocol B-27. *J Clin Oncol.* 2003;21(22):4165-74.
3. Gianni L, Baselga J, Eiermann W, et al. Feasibility and tolerability of sequential doxorubicin/paclitaxel followed by cyclophosphamide, methotrexate, and fluorouracil and its effects on tumor response as preoperative therapy. *Clin Cancer Res.* 2005;11(24 Pt 1):8715-21.
4. Fisher B, Brown A, Mamounas E, et al. Effect of preoperative chemotherapy on local-regional disease in women with operable breast cancer: findings from National Surgical Adjuvant Breast and Bowel Project B-18. *J Clin Oncol.* 1997;15(7):2483-93.
5. van Nes JG, Putter H, Julien JP, et al. Preoperative chemotherapy is safe in early breast cancer, even after 10 years of follow-up; clinical and translational results from the EORTC trial 10902. *Breast Cancer Res Treat.* 2009;115(1):101-13.
6. Mauriac L, Durand M, Avril A, et al: Effects of primary chemotherapy in conservative treatment of breast cancer patients with operable tumors larger than 3 cm: Results of a randomized trial in a single centre. *Ann Oncol.* 1991;2:347-354.
7. Scholl SM, Asselain B, Palangie T, et al. Neoadjuvant chemotherapy in operable breast cancer. *Eur J Cancer.* 1991;27(12):1668-71.
8. Makris A, Powles TJ, Ashley SE, et al. A reduction in the requirements for mastectomy in a randomized trial of neoadjuvant chemoendocrine therapy in primary breast cancer. *Ann Oncol.* 1998;9(11):1179-84.
9. Cortazar P, Zhang L, Untch M, et al. Pathological complete response and long-term clinical

benefit in breast cancer: the CTNeoBC pooled analysis. *Lancet*. 2014; 12;384(9938):164-72.

10. Mauri D, Pavlidis N, Ioannidis JP Neoadjuvant versus adjuvant systemic treatment in breast cancer: a meta-analysis. *J Natl Cancer Inst*. 2005; 2;97(3):188-94.
11. Rastogi P, Anderson SJ, Bear HD, et al. Preoperative chemotherapy: updates of National Surgical Adjuvant Breast and Bowel Project Protocols B-18 and B-27. *J Clin Oncol*. 2008;26(5):778-85.
12. von Minckwitz G. Neoadjuvant chemotherapy in breast cancer-insights from the German experience. *Breast Cancer*. 2012;19(4):282-8.
13. Boughey JC, Ballman KV, McCall LM, et al. Tumor Biology and Response to Chemotherapy Impact Breast Cancer-specific Survival in Node-positive Breast Cancer Patients Treated With Neoadjuvant Chemotherapy: Long-term Follow-up From ACOSOG Z1071 (Alliance). *Ann Surg*. 2017;266(4):667-676.
14. EBCTCG (Early Breast Cancer Trialists' Collaborative Group), McGale P, Taylor C, Correa 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: 2127-359
15. Early Breast Cancer Trialists' Collaborative Group (EBCTCG), Darby S, McGale P, Correa C, et al. Effect of radiotherapy after breast-conserving surgery on 10-year recurrence and 15-year breast cancer death: meta-analysis of individual patient data for 10,801 women in 17 randomised trials. *Lancet*, 2011, 378: 1707-1716
16. M. Donker, G. van Tienhoven, M.E. Straver, et al. Radiotherapy or surgery of the axilla after a positive sentinel node in breast cancer (EORTC 10981-22023 AMAROS): a randomised, multicentre, open-label, phase 3 non-inferiority trial. *Lancet Oncol*. 2014; 15:1303-1310
17. Buchholz TA, et al. Predictors of local-regional recurrence after Neoadjuvant chemotherapy and mastectomy without radiation *J Clin Oncol*.. 2002;20(1):17-23.
18. Huang HE, Tucker SL, Strom EA, et al. Postmastectomy radiation improves local-regional control and survival for selected patients with locally advanced breast cancer treated with neoadjuvant chemotherapy and mastectomy. *J Clin Oncol*. 2004; 22: 4691-9
19. McGuire SE, Gonzales-Angulo AN, Huang HE, et al. Postmastectomy radiation improves the outcome of patients with locally advanced breast cancer who achieve a pathologic complete response to neoadjuvant chemotherapy. *Int J Radiat Oncol Biol Phys*. 2007;68(4):1004-9
20. Krug D, Lederer B, Seither F, et al. Post-Mastectomy Radiotherapy After Neoadjuvant Chemotherapy in Breast Cancer: A Pooled Retrospective Analysis of Three Prospective Randomized Trials. *Ann Surg Oncol*. 2019;26(12):3892-3901.
21. Boersma LJ, Verloop J, Voogd AC, et al. Radiotherapy after primary CHEMotherapy (RAP-CHEM): Practice variation in a Dutch registration study (BOOG 2010-03). *Radiother Oncol*. 2020;145:201-208. doi: 10.1016/j.radonc.2020.01.018.
22. Burstein HJ, Curigliano G, Loibl S et al. Estimating the benefits of therapy for early stage breast cancer The St Gallen International Consensus Guidelines for the primary therapy of early breast cancer 2019. *Ann Oncol* 2019.