



## BÖLÜM 31

# JİNEKOLOJİK KANSERLERDE SİTOREDÜKTİF CERRAHİ

Serkan AKIŞ<sup>1</sup>

### GİRİŞ

Gastro-intestinal ve jinekolojik malignitelere sekonder ortaya çıkan peritoneal karsinomatosis; uzun yıllardır kemoterapi ile tedavi edilmeye çalışılmış ve hastalara palyatif destek verilmiştir. İlerleyen yıllarda ise tümör yükünün tamamen ortadan kaldırılması hedeflenmiştir. Paul Sugarbaker tarafından tanımlanmış olan sitoredüktif cerrahi, batin içinde gözle görülür tümöral doku bırakmayacak şekilde tüm implant, organ ve/veya peritoneal yüzeylerin cerrahi olarak çıkarılması prosedürüdür (1,2).

Sitoredüktif cerrahi post-operatif tümör yükünü, semptomları azaltacağı ve hastanın yaşam kalitesini artıracığı için tedavinin temel taşı olmaktadır (3). Eğer bu kapsamlı cerrahi prosedür; neo-adjuvan kemoterapi sonrasında yapılmışsa interval sitoredüktif cerrahi, nüks hastalıkta yapılmışsa sekonder (tersiyer/kvartner) sitoredüktif cerrahi tanımlaması yapılır. Optimal sitoredüksiyon  $\leq 1$  cm rezidüel hastalık olarak tanımlanır (4,5). İleri evrelerde rezidü kalmayan hastalar ile 10 mm< rezidü kalan hastaların ortalama sağkalım süreleri sırasıyla; 70 ve 30 ay olarak bildirilmiştir (p<0.001)

(6). Dolayısıyla rezidü tümör kalması veya inkomplet cerrahi toplam sağkalımda en önemli prognostik faktörlerden biri olmaktadır ve bu nedenle optimal sitoredüksiyon elde etmek için maksimum efor sarf edilmelidir (1,7,8-10). Amaç kemoterapötik ajanın küçültülmüş tümöre daha iyi perfüze olmasını sağlamak ve ajana direnç gelişimini azaltarak sağkalımı artırmaktır (11).

Over kanseri kadınlarda en sık görülen 8. kanser türüdür (12). En sık seröz tip epitelyal over kanseri (EOK) görülür ve hastalığın evresi FIGO'ya göre en önemli prognostik faktördür (13). Over kanseri jinekolojik kanserlere bağlı ölümlerin en başında gelmekle birlikte tüm hastalar değerlendirildiğinde 5 yıllık toplam sağkalım oranı yaklaşık %45'dir (14,15). Tedavide genel olarak laparotomi önerilir. Batin yıkama sıvısı alınması ardından histerektomi, bilateral salpingooferektomi, total infrakolik omentektomi ve pelvik/paraaortik lenf nodu diseksiyonu uygulanır (16). Çünkü omental tutulum oranı %35, yıkama sıvısında malign sitoloji oranı %33 olarak bildirilmiştir (13). Sistemik lenfadenektominin sıklıkla önerildiği seröz EOK'nın aksine, müsinöz over kanserle-

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- Amaç kemoterapinin tümöral dokulara daha iyi perfüze olmasını sağlamak ve ilaca rezistans gelişimini azaltarak sağkalımı artırmaktır.
- Optimal sitoredüksiyon; cerrahların deneyime, becerisine ve operasyonun yapıldığı merkezin imkanlarına oldukça bağlıdır.
- Over ve rektosigmoid kolon anatomik komşuluğu nedeniyle sıklıkla birlikte etkilenmektedir.
- Tüm tümör odaklarının çıkarılması için diyafram periton stripping, splenektomi, parsiyel hepatektomi, distal pankreatektomi, parsiyel sistektomi gibi kapsamlı cerrahiler endike olabilir.
- Hangi hastalarda optimal sitoredüksiyonun mümkün olabileceği konusunda görüntüleme yöntemlerinin yararı kısıtlı olabilir, şüphe varsa cerrahi öncesi laparoskopik değerlendirme fayda sağlayabilir.
- Son yıllarda mikroskopik sitoredüksiyonu hedefleyen ve ısıtılmış intraperitoneal kemo-terapi (HIPEC) ile ilgili çalışmaların sonuçları, hangi hasta gruplarında faydalı olabileceği konusunda titizlikle değerlendirilmelidir.

## KAYNAKLAR

1. Du Bois A, Reuss A, Pujade-Lauraine E, Harter P, Ray-Coquard I, Pfisterer J. Role of surgical outcome as prognostic factor in advanced epithelial ovarian cancer: a combined exploratory analysis of 3 prospectively randomized phase 3 multicenter trials: by the Arbeitsgemeinschaft Gynaekologische Onkologie Studiengruppe Ovarialkarzinom (AGO-OVAR) and the Groupe d'Investigateurs Nationaux Pour les Etudes des Cancers de l'Ovaire (GINECO). *Cancer*. 2009;115(6):1234-44.
2. Lemoine L, Sugarbaker P, Van der Speeten K. Pathophysiology of colorectal peritoneal carcinomatosis: Role of the peritoneum. *World J Gastroenterol*. 2016;22(34):7692-707.
3. Salani R., Cosgrove CM. Cancer of the ovary, fallopian tube, and peritoneum: Surgical cytoreduction UpToDate. Retrieved February 15, 2022, from <https://www.uptodate.com/contents/cancer-of-the-ovary-fallopian-tube-and-peritoneum-surgical-cytoreduction>.
4. Chi DS, Eisenhauer EL, Lang J, et al. What is the optimal goal of primary cytoreductive surgery for bulky stage IIIC epithelial ovarian carcinoma (EOC)? *Gynecol Oncol* 2006;103:559.
5. Winter WE 3rd, Maxwell GL, Tian C, et al. Prognostic factors for stage III epithelial ovarian cancer: a Gynecologic Oncology Group Study. *J Clin Oncol* 2007;25:3621.
6. Chiva LM, Castellanos T, Alonso S, et al. Minimal macroscopic residual disease (0.1-1 cm). Is it still a surgical goal in advanced ovarian cancer? *Int J Gynecol Cancer*. 2016;26:906-911.
7. Aletti GD, Dowdy SC, Gostout BS, et al. Aggressive surgical effort and improved survival in advanced-stage ovarian cancer. *Obstet Gynecol*. 2006;107:77-85.
8. Angeles MA, Martínez-Gómez C, Migliorelli F, et al. Novel Surgical Strategies in the Treatment of Gynecological Malignancies. *Curr Treat Options Oncol*. 2018;19(12):73.
9. Lheureux S, Braunstein M, Oza AM. Epithelial ovarian cancer: evolution of management in the era of precision medicine. *CA Cancer J Clin* 2019;69:280-304.
10. Dessapt AL, Huchon C, Ngo C, Bats AS, Bensaid C, Lecuru F. Is complete cytoreductive surgery feasible in this patient with ovarian cancer? *Surg Oncol*. 2016;25(3):326-31.
11. Bristow RE, Tomacruz RS, Armstrong DK, et al. Survival effect of maximal cytoreductive surgery for advanced ovarian carcinoma during the platinum era: a meta-analysis. *J Clin Oncol* 2002; 20:1248.
12. Sung H, Ferlay J, Siegel RL, et al. Global Cancer Statistics 2020: GLOBOCAN Estimates of Incidence and Mortality Worldwide for 36 Cancers in 185 Countries. *CA Cancer J Clin*. 2021;71(3):209-249.
13. Hernandez-Lopez LA, Elizalde-Mendez A. How far should we go in optimal cytoreductive surgery for ovarian cancer? *Chin Clin Oncol*. 2020;9(5):70.
14. Siegel R, Naishadham D, Jemal A. Cancer statistics, 2013. *CA Cancer J Clin*. 2013;63(1):11-30.
15. Vitale SG, Marilli I, Lodato M, et al. The role of cytoreductive surgery in advanced-stage ovarian cancer: a systematic review. *Updates Surg* 2013;65:265-70.
16. Chang SJ, Bristow RE, Chi DS, Cliby WA. Role of aggressive surgical cytoreduction in advanced ovarian cancer. *J Gynecol Oncol* 2015;26:336-42.
17. Schmeler KM, Tao X, Frumovitz M, et al. Prevalence of lymph node metastasis in primary mucinous carcinoma of the ovary. *Obstet Gynecol*. 2010;116:269-273.
18. Harter P, Sehouli J, Lorusso D, et al. LION: Lymphadenectomy in ovarian neoplasms—a prospective randomized AGO study group led gynecologic cancer intergroup trial. *J Clin Oncol*. 2017;35:5500.
19. Chan JK, Urban R, Hu JM, et al. The potential therapeutic role of lymph node resection in epithelial ovarian cancer: a study of 13,918 patients. *Br J Cancer*. 2007;96:1817-22.
20. Lengyel E. Ovarian cancer development and metas-

- tasis. *Am J Pathol* 2010;177:1053-64.
21. Vizzielli G, Costantini B, Tortorella L, et al. Influence of intraperitoneal dissemination assessed by laparoscopy on prognosis of advanced ovarian cancer: an exploratory analysis of a single-institution experience. *Ann Surg Oncol*. 2014;21(12):3970-7.
  22. Escayola C, Ferron G, Romeo M, et al. The impact of pleural disease on the management of advanced ovarian cancer. *Gynecol Oncol*. 2015;138:216–220.
  23. Ledermann JA, Raja FA, Fotopoulou C, et al. Newly diagnosed and relapsed epithelial ovarian carcinoma; ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Ann Oncol* 2013;24 suppl 6:vi24-32.
  24. Risum S, Hogdall C, Loft A, et al. Does the use of diagnostic PET/CT cause stage migration in patients with primary advanced ovarian cancer? *Gynecol Oncol*. 2010;116:395–398.
  25. Fagotti A, Fanfani F, Ludovisi M, et al. Role of laparoscopy to assess the chance of optimal cytoreductive surgery in advanced ovarian cancer: a pilot study. *Gynecol Oncol*. 2005;96:729–735.
  26. Sugarbaker PH. Surgical responsibilities in the management of peritoneal carcinomatosis. 2010;713–24.
  27. Fagotti A, Ferrandina G, Fanfani F, et al. A Laparoscopy-based score to predict surgical outcome in patients with advanced ovarian carcinoma: a pilot study. *Ann Surg Oncol*. 2006;13:1156–61.
  28. Petrillo M, Vizzielli G, Fanfani F, et al. Definition of a dynamic laparoscopic model for the prediction of incomplete cytoreduction in advanced epithelial ovarian cancer: proof of a concept. *Gynecol Oncol*. 2015;139(1):5-9.
  29. Bristow RE, del Carmen MG, Kaufman HS, Montz FJ. Radical oophorectomy with primary stapled colorectal anastomosis for resection of locally advanced epithelial ovarian cancer. *J Am Coll Surg* 2003;197:565-74.
  30. Hoffman MS, Zervose E. Colon resection for ovarian cancer: intraoperative decisions. *Gynecol Oncol* 2008;111:S56-65.
  31. Giorda G, Gadducci A, Lucia E, et al. Prognostic role of bowel involvement in optimally cytoreduced advanced ovarian cancer: a retrospective study. *J Ovarian Res* 2014;7:72.
  32. Mourton SM, Temple LK, Abu-Rustum NR, et al. Morbidity of rectosigmoid resection and primary anastomosis in patients undergoing primary cytoreductive surgery for advanced epithelial ovarian cancer. *Gynecol Oncol* 2005;99:608.
  33. Tebes SJ, Cardosi R, Hoffman MS. Colorectal resection in patients with ovarian and primary peritoneal carcinoma. *Am J Obstet Gynecol* 2006;195:585.
  34. Kingham TP, Pachter HL. Colonic anastomotic leak: risk factors, diagnosis, and treatment. *J Am Coll Surg* 2009;208:269.
  35. Lago V, Flor B, Matute L, et al. Ghost Ileostomy in Advanced Ovarian Cancer: A Reliable Option. *Int J Gynecol Cancer* 2018;28(7):1418-1426.
  36. Kalogera E, Nitschmann CC, Dowdy SC, Cliby WA, Langstraat CL. A prospective algorithm to reduce anastomotic leaks after rectosigmoid resection for gynecologic malignancies. *Gynecol Oncol* 2017;144:343-7.
  37. Jauffret C, Lambaudie E, Bannier M, Buttarelli M, Houvenaeghel G. Place de la coelioscopie robot-assistée dans la prise en charge des récidives de cancers pelviens [Robot-assisted laparoscopy in the management of recurrent pelvic cancer]. *Gynecol Obstet Fertil*. 2011;39(12):674-80.
  38. Eisenhauer EL, Abu-Rustum NR, Sonoda Y, et al. The addition of extensive upper abdominal surgery to achieve optimal cytoreduction improves survival in patients with stages IIIC-IV epithelial ovarian cancer. *Gynecol Oncol* 2006;103:1083-90.
  39. Prader S, Harter P, Grimm C, et al. Surgical management of cardiophrenic lymph nodes in patients with advanced ovarian cancer. *Gynecol Oncol* 2016;141:271-5.
  40. Chi DS, Franklin CC, Levine DA, et al. Improved optimal cytoreduction rates for stages IIIC and IV epithelial ovarian, fallopian tube, and primary peritoneal cancer: a change in surgical approach. *Gynecol Oncol* 2004;94:650.
  41. Chi DS, Eisenhauer EL, Zivanovic O, et al. Improved progression-free and overall survival in advanced ovarian cancer as a result of a change in surgical paradigm. *Gynecol Oncol* 2009;114:26.
  42. Cliby W, Dowdy S, Feitoza SS, et al. Diaphragm resection for ovarian cancer: technique and short-term complications. *Gynecol Oncol* 2004;94:655.
  43. Eisenkop SM, Nalick RH, Wang HJ, Teng NN. Peritoneal implant elimination during cytoreductive surgery for ovarian cancer: impact on survival. *Gynecol Oncol* 1993;51:224.
  44. Tsolakidis D, Amant F, Van Gorp T, et al. Diaphragmatic surgery during primary debulking in 89 patients with stage IIIB-IV epithelial ovarian cancer. *Gynecol Oncol* 2010;116:489.
  45. Fanfani F, Fagotti A, Gallotta V, et al. Upper abdominal surgery in advanced and recurrent ovarian cancer: role of diaphragmatic surgery. *Gynecol Oncol* 2010;116:497.
  46. Eisenkop SM, Spirtos NM, Lin WC. Splenectomy in the context of primary cytoreductive operations for advanced epithelial ovarian cancer. *Gynecol Oncol* 2006;100:344.
  47. Magtibay PM, Adams PB, Silverman MB, et al. Splenectomy as part of cytoreductive surgery in ovarian cancer. *Gynecol Oncol* 2006;102:369.
  48. Scholz HS, Tasdemir H, Hunlich T, et al. Multivisceral cytoreductive surgery in FIGO stages IIIC and IV epithelial ovarian cancer: results and 5-year follow-up. *Gynecol Oncol* 2007;106:591.
  49. Martinez A, Pomel C, Mery E, Querleu D, Gladiéff L, Ferron G. Celiac lymph node resection and porta hepatis disease resection in advanced or recurrent epithelial ovarian, fallopian tube, and primary

- peritoneal cancer. *Gynecol Oncol*. Elsevier Inc. 2011;121:258–63.
50. Markman M. Intraperitoneal chemotherapy in the management of malignant disease. *Expert Rev Anti-cancer Ther*. 2001;1(1):142-8.
  51. Kampinga HH, Dynlacht JR, Dikomey E. Mechanism of radiosensitization by hyperthermia (> or = 43 degrees C) as derived from studies with DNA repair defective mutant cell lines. *Int J Hyperthermia*. 2004;20(2):131-9.
  52. Sugarbaker PH. New standard of care for appendiceal epithelial neoplasms and pseudomyxoma peritonei syndrome? *Lancet Oncol*. 2006;7:69–76.
  53. Kim J, Bhagwandin S, Labow DM. Malignant peritoneal mesothelioma: a review. *Ann Transl Med*. 2017;5:236.
  54. Spiliotis J, Halkia E, Lianos E, et al. Cytoreductive surgery and HIPEC in recurrent epithelial ovarian cancer: a prospective randomized phase III study. *Ann Surg Oncol*. 2015;22(5):1570-5.
  55. Chiva LM, Gonzalez-Martin A. A critical appraisal of hyperthermic intraperitoneal chemotherapy (HIPEC) in the treatment of advanced and recurrent ovarian cancer. *Gynecol Oncol*. 2015;136(1):130-5.
  56. Van Driel WJ, Koole SN, Sikorska K, et al. Hyperthermic Intraperitoneal Chemotherapy in Ovarian Cancer. *N Engl J Med*. 2018;378(3):230-240.
  57. Bommert M, Harter P, Heitz F, du Bois A. When should Surgery be used for Recurrent Ovarian Carcinoma? *Clin Oncol (R Coll Radiol)*. 2018;30(8):493-497.
  58. Siegel RL, Miller KD, Jemal A. Cancer statistics, 2020. *CA Cancer J Clin*. 2020;70(1):7-30.
  59. Galaal K, Al Moundhri M, Bryant A, Lopes AD, Lawrie TA. Adjuvant chemotherapy for advanced endometrial cancer. *Cochrane Database Syst Rev*. 2014;2014(5):CD010681.
  60. Shih KK, Yun E, Gardner GJ, Barakat RR, Chi DS, Leitao MM Jr. Surgical cytoreduction in stage IV endometrioid endometrial carcinoma. *Gynecol Oncol*. 2011;122(3):608-611.
  61. Barlin JN, Puri I, Bristow RE. Cytoreductive surgery for advanced or recurrent endometrial cancer: a meta-analysis. *Gynecol Oncol*. 2010;118(1):14-8.
  62. Philp L, Kanbergs A, Laurent JS, Growdon WB, Feltmate C, Goodman A. The use of neoadjuvant chemotherapy in advanced endometrial cancer. *Gynecol Oncol Rep*. 2021;36:100725.
  63. Rabinovich A. Neo-adjuvant chemotherapy for advanced stage endometrial carcinoma: a glimmer of hope in select patients. *Arch Gynecol Obstet*. 2016;293(1):47-53.
  64. Vergote I, Tropé CG, Amant F, et al. European Organization for Research and Treatment of Cancer-Gynaecological Cancer Group; NCIC Clinical Trials Group. Neoadjuvant chemotherapy or primary surgery in stage IIIC or IV ovarian cancer. *N Engl J Med*. 2010;363(10):943-53.
  65. Wilkinson-Ryan I, Frolova AI, Liu J, et al. Neoadjuvant chemotherapy versus primary cytoreductive surgery for stage IV uterine serous carcinoma. *Int J Gynecol Cancer*. 2015;25(1):63-8.
  66. Albright BB, Monuszko KA, Kaplan SJ, et al. Primary cytoreductive surgery for advanced stage endometrial cancer: a systematic review and meta-analysis. *Am J Obstet Gynecol*. 2021;225(3):237.e1-237.e24.