











Postoperative pelvic radiotherapy (RT) is considered if risk factors are present, that is, deep myometrial invasion (50% or more of the myometrial width) and/or grade 2 or 3 histology. Patients with stage I endometrial carcinoma, treated with TAH–BSO followed by postoperative RT have a 5–year overall survival of 80–90%, a 5–year cancer specific survival of 90–95% and a 5-year locoregional recurrence rate of 4–8%<sup>(1-7)</sup>. The subgroup of patients with grade 3 tumors with deep ( $\geq 50\%$ ) myometrial invasion, however, have a considerably higher risk of locoregional and most notably, distant relapse<sup>(1,2,8,9)</sup>.

In the randomised study reported by Aalders *et al*<sup>(1)</sup>, 540 women who had undergone TAH–BSO and postoperative vaginal RT (60 Gy) were randomly assigned to additional pelvic RT or observation. Although pelvic RT reduced vaginal and pelvic recurrence rates (2% versus 7% in the control group), more distant metastases were found in the pelvic RT group (10% versus 5%), and survival was not improved (89% versus 91% 5–year survival). Only the subgroup with grade 3 tumors with deep ( $\geq 50\%$ ) invasion showed both improved local control and survival after additional pelvic RT. Most loco regional relapses are located in the vagina, mainly in the vaginal vault. In previously unirradiated patients reported salvage rates for isolated vaginal relapse are 40–80%<sup>(6,10-15)</sup>. The salvage rate of extrvaginal pelvic relapse is low, ranging from <5% for patients who have received previous pelvic RT, to 20–30% in those not previously irradiated<sup>(6,11,12,15,16)</sup>.

In the GOG staging study<sup>(17)</sup>, the risk of pelvic node metastases in surgical stage I endometrial carcinoma was shown to be less than 10%, except for the subgroup with grade 3 tumors with deep (outer 33%) myometrial invasion, in which the risk amounted to 18%.

## References

- [1] Aalders J, Abeler V, Kolstad P, et al. Postoperative external irradiation and prognostic parameters in stage I endometrial carcinoma: clinical and histopathologic study of 540 patients. *Obstet Gynecol* 1980;56:419-27.
- [2] Meerwaldt JH, Hoekstra CJ, van Putten WL, et al. Endometrial adenocarcinoma, adjuvant radiotherapy tailored to prognostic factors. *Int J Radiat Oncol Biol Phys* 1990;18:299-304.
- [3] Grigsby PW, Perez CA, Kuten A, et al. Clinical stage I endometrial cancer: prognostic factors for local control and distant metastasis and implications of the new FIGO surgical staging system. *Int J Radiat Oncol Biol Phys* 1992;22:905-11.
- [4] DiSaia PJ, Creasman WT, Boronow RC, et al. Risk factors and recurrent patterns in Stage I endometrial cancer. *Am J Obstet Gynecol* 1985;151:1009-15.
- [5] Brady LW, Perez CA, Bedwinek JM. Failure patterns in gynecologic cancer. *Int J Radiat Oncol Biol Phys* 1986;12:549-57.
- [6] Poulsen MG, Roberts SJ. Prognostic variables in endometrial carcinoma. *Int J Radiat Oncol Biol Phys* 1987;13:1043-52.
- [7] Irwin C, Levin W, Fyles A, et al. The role of adjuvant radiotherapy in carcinoma of the endometrium- results

- in 550 patients with pathologic stage I disease. *Gynecol Oncol* 1998;70:247-54.
- [8] Burke TW, Heller PB, Woodward JE, et al. Treatment failure in endometrial carcinoma. *Obstet Gynecol* 1990;75:96-101.
- [9] Morrow CP, Bundy BN, Kurman RJ, et al. Relationship between surgical-pathological riskfactors and outcome in clinical stage I and II carcinoma of the endometrium: a Gynecologic Oncology Group study. *Gynecol Oncol* 1991;40:55-65.
- [10] Bond WH. Early uterine body carcinoma: has post-operative vaginal irradiation any value? *Clin Radiol* 1985;36:619-23.
- [11] Ackerman I, Malone S, Thomas G, et al. Endometrial carcinoma--relative effectiveness of adjuvant irradiation vs therapy reserved for relapse. *Gynecol Oncol* 1996;60:177-83.
- [12] Poulsen MG, Roberts SJ. The salvage of recurrent endometrial carcinoma in the vagina and pelvis. *Int J Radiat Oncol Biol Phys* 1988;15:809-13.
- [13] Hoekstra CJ, Koper PC, van Putten WL. Recurrent endometrial adenocarcinoma after surgery alone: prognostic factors and treatment. *Radiother Oncol* 1993;27:164-6. version: March 2003 10
- [14] Curran WJ, Jr., Whittington R, Peters AJ, et al. Vaginal recurrences of endometrial carcinoma: the prognostic value of staging by a primary vaginal carcinoma system. *Int J Radiat Oncol Biol Phys* 1988;15:803-8.
- [15] Sears JD, Greven KM, Hoen HM, et al. Prognostic factors and treatment outcome for patients with locally recurrent endometrial cancer. *Cancer* 1994;74:1303-8.
- [16] Salazar OM, Feldstein ML, DePapp EW, et al. Endometrial carcinoma: analysis of failures with special emphasis on the use of initial preoperative external pelvic radiation. *Int J Radiat Oncol Biol Phys* 1977;2:1101-7.
- [17] Creasman WT, Morrow CP, Bundy BN, et al. Surgical pathologic spread patterns of endometrial cancer. A Gynaecologic Oncology Group Study. *Cancer* 1987;60:2035-41.