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### Endometrial carcinoma (EC) in women with breast cancer (BC)

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**Methods:** A multicentre, hospital-based, case-control study, was organized in 14 French cancer centres, comprising 138 women in whom an EC had been diagnosed between 1976 and 1990, at least 6 months after BC. A total of 467 women with BC were individually matched on date of birth and date of diagnosis of BC.

**Results:** In a multivariate analysis, the risk of EC was significantly increased with use of TAM (mOR = 4,  $p = 0.0014$ ), length of treatment more than 3 years (mOR = 3.9,  $p = 0.016$ ) and pelvic radiotherapy (mOR = 3.2,  $p = 0.006$ ). TAM has been taken by 91 cases and 191 controls. Women with EC occurring after completion of TAM were younger at time of BC diagnosis than those observed on untreated women or with EC during TAM (Median age: 50 y. VS 63 y and 61 y:  $p = 0.01$ ). The median cumulative dose of TAM was not significantly different between the two exposed groups nor the median duration of exposure. Women who had endometrial carcinoma after TAM therapy were younger at BC diagnosis, underwent more frequently pelvic radiotherapy and showed more advanced stages and poorer prognosis. Median follow-up after EC was respectively 40 m. and 84 m. for treated and untreated women. The overall survival (OS) after EC was shorter for the TAM treated group than for untreated women ( $p = 0.005$ ) and survival was better for EC observed during TAM therapy than for those diagnosed after ended treatment  $p = 0.02$ ).

**Hypothesis:** EC observed during TAM therapy could be prevalent neoplasia but an hypothetical oncogenic effect of TAM and/or pelvic radiotherapy could be discussed for EC observed after treatment ended.

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### Acute and late toxicity in the adjuvant radiotherapy of endometrial carcinoma. Analysis of 215 patients

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**Purpose:** To evaluate the acute and late toxicity in the adjuvant radiotherapy treatment of endometrial carcinoma and its influence in the outcome and the quality of life in the patients that underwent a pelvic irradiation.

**Methods:** From 1978 to 1995, 215 patients were diagnosed of endometrial carcinoma in stage I and II, previously treated with total abdominal hysterectomy and bilateral salpingo-oophorectomy (TAH-BSO) or TAH-BSO and sample of pelvic nodes (TAH-BSO-SL). 168 patients were treated with TAH-BSO and 47 with TAH-BSO-SL and subsequently treated with external radiotherapy exclusively (18 patients), external radiotherapy and intracavitary insertion (180 patients) or intracavitary insertion exclusively (17 patients). To evaluate the toxicity we used the RTOG classification.

**Results:** Acute toxicity was observed in 161 patients (74.9%). It was G1 in 26.5%, G2 in 35.8, G3 in 11.2% and G4 in 1.4%. The more frequent symptoms were diarrhea (N = 116), dermatitis (N = 60) and cystitis (N = 32). An interruption of the treatment was necessary in 56 patients because of the acute toxicity. The local control was decreased in the group of patients in which the treatment was extended more than seven weeks ( $p = 0.002$ ). Late toxicity was found in 45 patients (21%). It was G1-G2 in 35 patients (16.3%) and G3-G4 in 10 patients (4.7%).

**Conclusion:** An inadequate control of acute symptoms during pelvic irradiation influence in the local control and survival in patients with endometrial carcinoma.

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### Radiation therapy for primary vaginal cancers

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**Purpose:** We have retrospectively evaluated the treatment results of radiotherapy for vaginal carcinomas.

**Methods:** From 1980 through 1991, 97 patients (median age 68 years) were treated for vaginal cancers, 79 had squamous cell carcinomas. All of them received HDR-brachytherapy. 45 had additional external megavoltage radiotherapy with curative intent, the other were treated with brachytherapy alone or in combination with orthovolt with palliative intent because of advanced disease or poor general condition.

**Results:** The 5-year survival after combined brachy- plus external radiotherapy was 85% (6/7) in stage I, 80% (12/15) in stage II and 35% (6/17) in stage III. In the brachytherapy alone group, 43% (9/21) in stage I and 29% (5/17) in stage II survived 5 years. 8/45 (17%) of patients with external megavoltage therapy developed local recurrences as compared to 26/53 (49%) without adequate external radiotherapy. Vaginal fistulas occurred in 3 patients.

**Conclusions:** Combined HDR-brachytherapy plus external radiotherapy yields good local control and survival figures in vaginal cancers at an acceptable low rate of complications.

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### Isolated local recurrence in carcinoma of the vulva: Prognosis and implications for treatment

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**Purpose:** Despite a lack of published data, an isolated vulvar recurrence is regarded as having a high surgical salvage rate when compared to regional or distant recurrence. This study evaluates the impact of local recurrence on survival.

**Methods:** Forty-seven of 310 patients were found to have an isolated vulvar recurrence following definitive therapy for squamous cell carcinoma between 1980-96 at a single institution. Actuarial survival rates were calculated by the Kaplan-Meier method and prognostic factors analyzed by the Cox proportional hazards model.

**Results:** Thirty-one patients were treated with surgery alone, 14 with combined therapy or radiation alone and 2 were not treated. Actuarial 5 year survival was 45% for all patients with no significant difference between the treatment groups. On univariate analysis disease free interval < 1 year, clinical stage, pathologically positive groin nodes at presentation, capillary space involvement (cls), and size of recurrence were all significant prognostic factors for survival. On multivariate analysis, only cls, tumor size at recurrence and pathologically positive groin nodes reached statistical significance. When grouped, patients with a tumor < 3 cm at recurrence, negative cls and pathologically negative groin nodes had an actuarial 2 year survival of 60% compared with 30% for patients with > 3 cm tumor, positive cls and pathologically positive nodes. The majority of patients died of either uncontrolled loco-regional disease (9) or distant disease (13).

**Conclusion:** An isolated local recurrence is a poor prognostic factor for survival in carcinoma of the vulva. As this group of patients have a high local and distant failure rate, more innovative treatment strategies are needed, such as using systemic therapy in combination with better local treatment.

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### Radiotherapy and hyperthermia in inoperable pelvic tumours: Results of Dutch randomized studies

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**Introduction:** Advanced, inoperable tumours originating from the bladder, cervix, and rectum are characterised by disappointing local control rates following radiotherapy. Both preclinical and clinical data have shown that the efficacy of radiotherapy can be improved by the addition of hyperthermia.

**Methods:** The effect of hyperthermia in addition to standard radiotherapy has been investigated in a randomized study, including patients with bladder (T3 and T4), cervical (IIB-distal, IIB and IV), and rectal (primary or recurrent) cancer.

**Results:** The preliminary results including total 298 patients show a significant improvement in complete response rate by additional hyperthermia, from 37% to 58%, for the whole patient group. The effect of HT was most impressive in the group with cervical cancer, with significant improvement of both local control and overall survival. In bladder cancer, the improvement in local control was temporary and not resulting in a better survival. In rectal cancer, the improvement in local control seemed less and was not