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CAN RT-PCR ANALYSIS OF RADICAL PROSTATECTOMY FLUIDS CONTRIBUTE TO CLINICAL DECISION-MAKING ABOUT THE ROLE OF POST-OPERATIVE IRRADIATION FOR PROSTATE CANCER?

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Objective: The decision to add post-op irradiation (RT) following prostatectomy (RP) is controversial. It was hypothesized that use of the Reverse-Transcriptase Polymerase Chain Reaction (RT-PCR) technique could lead to early detection of residual local cells to identify patients requiring adjuvant irradiation to prevent wound failure. A study was designed to determine if prostatic cells could be found in the operative site through RT-PCR targeted at PSA and to correlate this with margin status. *Methods:* 14 patients undergoing RP had 10 cc (blood, urine, irrigant) aspirated from the operative field after transection of the dorsal vein, urethra, and bladder. Ficoll gradient fractionation was performed on the specimens and RNA was extracted from the cell pellet. The quality of the RNA and the presence of the PSA RNA message was determined by RT-PCR targeted at actin and PSA. *Results:* 5 of 14 (36%) tested positive for prostate cells in the operative field. 9 were found to have positive surgical margins. All 5 men with positive RT-PCR PSA assays had positive margins. No patients have manifested wound failure at a median followup of 12 months. *Conclusion:* These data suggest that positive surgical margins may be associated with PSA-expressing cells during RP. Although no patients have yet manifested wound failure, it is impossible to detect an advantage for this new technology over conventional microscopical assessment of the margins because no patients with negative margins had positive RT-PCR PSA assays. Unlike frozen sectioning of lymph nodes, results from the assay *cannot* be acquired intraoperatively and therefore cannot be part of any clinical decision-making algorithm to abort the RP. Although this new technology is feasible, it appears to add no value in predicting which patients benefit from postoperative RT.

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INCIDENCE AND NATURAL HISTORY OF METASTATIC ADENOCARCINOMA OF THE PROSTATE AT DIAGNOSIS

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From January 1989 to June 1994, prostatic adenocarcinoma was diagnosed in 139 patients (pts) at the Department of Urology of Belluno Hospital. Thirty-two/139 (23%) pts had distant metastases at diagnosis (stage D2). Median age was 70 yrs (range 45–86). Seventeen/32 (53%) pts had only urinary symptoms, 8/32 (25%) both urinary and systemic symptoms, 6/32 (19%) just systemic symptoms, and in 1/32 (3%) asymptomatic patient the diagnosis was casual. The site of metastases was bone in 30/32 (94%) pts, 3 of which had also liver and 1 also brain metastases; 1/32 (3%) pt had only brain and 1/32 only peritoneal metastases. The grading was G1 in 2/32 (6%) pts, G2 in 12/32 (38%), G3 in 14/32 (44%) and unknown in 4/32 (12%). PSA was lower than 4 ng/ml in 2/32 (6%) pts, higher than 100 ng/ml in 23/32 (74%), in 6/32 (19%) was between 5 and 99 ng/ml and in 1/32 pt it was unknown. Thirty/32 (94%) pts were treated with hormonotherapy, the remaining two, one with brain metastases and the other with peritoneal metastases, died after a month from diagnosis before beginning the therapy, 21/32 (66%) had TURP and 8/32 (25%) chemotherapy with or without palliative radiotherapy. Twentysix/32 (81%) pts had a minimum follow-up of 20 months. Median survival was 15 months (range 1–48+).

In conclusion, prostate adenocarcinoma is often diagnosed in stage D2 (in 23% of cases in Belluno); 7/32 (22%) pts had only systemic symptoms or were asymptomatic at diagnosis; bone is the most frequent metastatic site (94%); systemic therapy is mostly ineffective and survival rate is low (median survival 15 months).

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INFUSIONAL CHEMOTHERAPY BY IMPLANTABLE SUBCUTANEOUS PUMP: STUDY IN MULTIMETASTATIC KIDNEY CANCER

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65 patients with multimetastatic kidney cancer were treated by continuous infusional chemotherapy using a totally subcutaneous implantable pump. They were given from 8 to 78 fortnight cycles of fluorodeoxyuridine (FUDR) at doses ranging from 0.15 to 0.30 mg/kg/day. The sites of metastases were: lungs, liver, bone, lymph nodes, brain; moreover some patients had a contralateral kidney cancer or a recurrent disease at the site of the previous nephrectomy. The response rate was comparable to that of conventional iv chemotherapy, but to its comparison we obtained a dramatic decrease in side effects (6.1% anemia, 4.6% mucositis, 3% hepatitis-nausea-diarrhea). The infusional therapy is now being studied in a protocol including patients who were excluded from the IL-2/IFN protocol or showed a progressive disease during it.

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FREE AND α 1 ANTICHYMOTRYPSIN BOUND PSA IN PROSTATE DISEASES

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The discovery of prostate specific antigen (PSA) in the blood was a major step forward in the evaluation of prostate cancer. Nevertheless, at early stages, PSA assay has a low specificity: rather than a tumor marker, it has to be considered as a prostate (i.e. malignant and benign diseases) marker.

In order to evaluate the contribution of free PSA versus total PSA we tested 197 men (> 44 years) with RIACT CIS bio international techniques: 47 with prostate cancer, 128 BPH, 22 normal controls.

Results showed that Free/total PSA ratio is almost twice lower in patients with cancer than in patients with BPH or controls. Even if there is an overlap between cancer and BPH results, FPSA seems to provide a promising mean to differentiate benign and malignant prostate diseases at early stages.

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UPFRONT HORMONAL THERAPY, RADICAL PROSTATECTOMY AND RADIATION THERAPY FOR LOCALLY INVASIVE PROSTATE CANCER: A THREE YEAR FOLLOW-UP

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Combined treatment for clinical stage C carcinoma of prostate (CAP) in order to improve the disease free rate was done by upfront hormonal therapy (HT) followed by radical prostatectomy (RP) and radiation therapy (RT) or prolonged HT. Clinical staging was based on evaluation under anesthesia and metastatic work-up. Post RP pathological stage C patients in addition received adjuvant RT and D1 patients continued HT. Of 67 patients who entered the study, 54 were considered operable following HT therapy and underwent surgery, or whom 43 (80%) underwent PLND and RP (RP group). For the RP group the final pathological stage was B in 25/43 (58%), C in 13/43 (30%) and D1 in 5/43 (12%). For pathological stage C the mean follow-up period is 47 ± 19 months (range 12–87, median 47) with 1 patient dead of CAP, and 1 patient with detectable PSA. *Conclusions:* Upfront hormonal therapy, which successfully downstaged patients with clinical stage C prostate cancer followed by RP, can achieve a high disease free survival and compares favorably with other methods of treatments.

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METASTATIC RENAL CELL CARCINOMA (MRCC): RESPONSES TO DIFFERENT IMMUNOTHERAPIES

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Aim: to compare clinical responses and survival (median overall survival -MOS- and 2 year survival -% S-) in 48 patients treated with different immunotherapies for MRCC (Interferon -IFN- and Interleukin-2-IL-2-).

Methods: the patients were treated in the following ways:
—18 with IFN—(9 MU s.c. 3 times/week × 6 months): group A;
—11 with IL-2 (18 MU/m2 i.v. × 4 days/months c.i.): group B;
—19 with IFN + IL-2 (at the same dosages): group C.

Responses were evaluated as complete response (CR), partial response (PR), stable disease (SD), progression (PD), not evaluable (NE).

Results: 1 CR, 1 PR and 5 SD were seen in the group A (MOS = 15 months; %S = 32); 0CR, 3 PR and 2SD in the group B (MOS = 16 months; % S = 36); 1 CR, 4 PR and 4 SD in the group C (MOS = 18