

Eur J Cancer, Vol. 27, No. 1, p. 110, 1991.
 Printed in Great Britain
 0277-5379/91 \$3.00 + 0.00
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Asynchronous Bilateral Testicular Tumour without Previous Carcinoma *in situ*

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CARCINOMA *in situ* of the testicle is considered to be the standard precursor of clinically manifest tumours [1]. We report a case of testicular tumour in which this "rule" did not apply. Skakkebaek [2] showed that routine biopsy of the contralateral testis at the time of orchidectomy reliably detects carcinoma *in situ* on that side, since carcinoma *in situ* is distributed diffusely within the entire testicular parenchyma. Since 1988, at our department, such biopsy has routinely been done at the time of removal of the tumour-bearing testis. The method [3] is a standard 3–4 mm biopsy at the opposite side of the rete testis. Specimens are fixed in Carnoy's solution because formaldehyde is unsuitable for establishing the presence or absence of carcinoma *in situ*.

A 23-year-old male had a marker-negative pure seminoma pT3 No Mo without carcinoma *in situ* around the tumour removed. Biopsy of the contralateral testicle at the time of surgery showed normal testicular morphology without evidence of carcinoma *in situ* (Fig. 1). Palpation and ultrasonography of the testis were normal. After adjuvant irradiation of the retroperitoneum, serum levels of beta human chorionic gonadotropin had increased (92 IU/ml) at first follow-up 3 months later. Re-evaluation of the chest and retroperitoneum by axial computerised tomography did not show metastases. On palpation the contralateral testicle again appeared to be normal, but scrotal ultrasonography under identical conditions showed a hypoechoic lesion 6 mm in diameter in the centre of the testis. Surgery confirmed a tumour and 2 other small tumour foci were found. Histology identified the lesions as pure multifocal seminoma pT2 with carcinoma *in situ* in the immediately surrounding tissue. There was no carcinoma *in situ* at the site of the former biopsy within a margin of more than 15 mm, and placental alkaline phosphatase immunohistochemistry of this area was also negative.

Biopsy of the contralateral testicle negative for carcinoma *in situ* has so far been considered sufficient for excluding the development of an asynchronous contralateral tumour [4]. Nistal *et al.* [5] detected carcinoma *in situ* in only 5 of 722 patients who underwent testicular biopsy because of infertility. 2 patients without carcinoma *in situ* subsequently developed seminoma despite a negative biopsy result. Giwercman *et al.* reported a case similar to ours in a large series of 1500 testicular biopsies [6]. Their data and our case suggest that a contralateral testicular

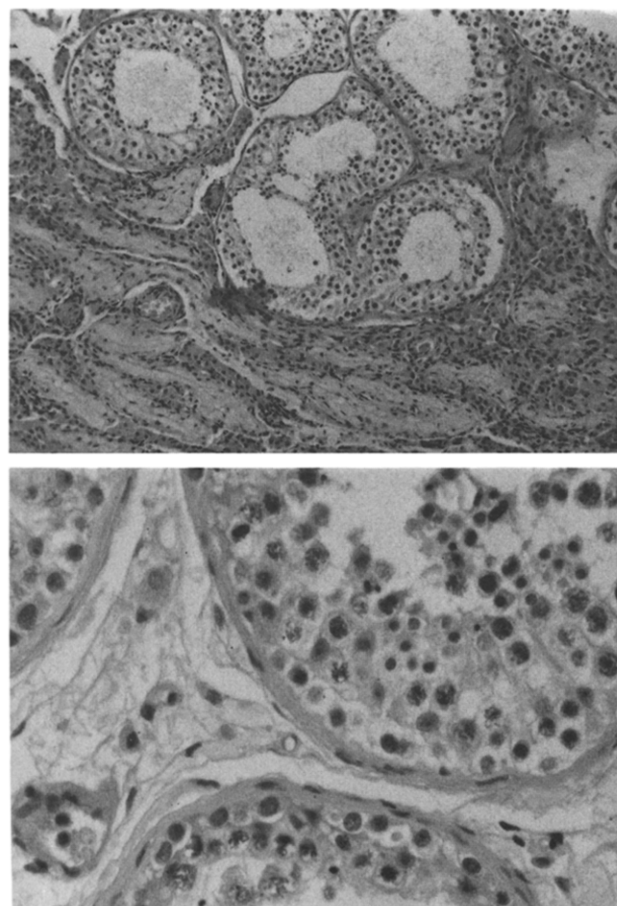


Fig. 1. Contralateral biopsy without evidence of carcinoma *in situ* (haematoxylin/eosin stain). Upper = $\times 55$ (with tubular damage and fibrosis); lower = $\times 220$.

biopsy negative for carcinoma *in situ* does not necessarily exclude the potential development of an asynchronous bilateral tumour of the testis.

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2. Skakkebaek NE. Clinical aspects of testicular carcinoma *in situ*. *Int J Androl* 1981 (Suppl. 4), 153–162.
3. Rowley MJ, Heller CG. The testicular biopsy: surgical procedure, fixation and staining techniques. *Fertil Steril* 1966, 17, 177–186.
4. van der Maase H, Rorth M, Jorgensen SW, *et al.* Carcinoma *in situ* of the contralateral testis in patients with testicular germ cell cancer: Study of 27 cases in 500 patients. *Br Med J* 1986, 293, 1398–1401.
5. Nistal M, Codesal J, Paniagua R. Carcinoma *in situ* of the testis in infertile men. A histological immunocytochemical and cytophotometric study of DNA content. *J Pathol* 1989, 159, 205–210.
6. Giwercman A, Berthelsen JG, Müller J, van der Maase H, Skakkebaek NE. Screening for carcinoma *in situ* of the testis. *Int J Androl* 1987, 10, 173–180.

Correction

CSF drug levels for children with acute lymphoblastic leukaemia treated by 5 g/m² methotrexate. — In this article by Dr G. Milano *et al.* (Vol. 26, pp. 492–495), the last author should have been D. Plantaz and not D. Frappaz.

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Revised 29 Oct. 1990; accepted 31 Oct. 1990.