A Nationwide Cohort Study of Surveillance for Stage I Seminoma

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Background

• Since 1984, the main treatment strategy of stage I seminoma patients in Denmark has been orchiectomy (removal of the testicle) followed by surveillance.

• Patients with stage I seminoma have cancer localized to the testis with no clinical, imaging, or biochemical evidence (i.e. tumor markers) of disseminated disease.

• The follow up program consisted of clinical visits, CT-scans/x-rays and measurements of tumor markers for 5 years.

• The aim of our study was to evaluate the Danish surveillance strategy in a nationwide cohort study.
Methods

• Patients diagnosed with stage I seminoma in Denmark from 1984 to 2008
• Data were collected from patient files and linked to different registries
• Information concerning outcome, relapses, treatment of relapses and causes of death have been analyzed
• Analyses of prognostic factors have been performed
• Data collected up to December 2012
Results

1822 stage I seminoma patients were included

Median follow up time: 15.4 years (0-28 years)

355 relapses (19.5%) were observed

Only 10 patients (0.55%) died of testicular cancer or of treatment-related causes
Results

Median time to relapse: 13.7 months (1.2 -173.3 months)
- 72.4% (257) relapsed within the first 2 years
- 20.3% (72) relapsed within year 2 to 5
- 7.3% (26) relapsed after 5 years follow up

Prognostic factors for relapse:
- Tumor size > 4 cm
- Vascular invasion
- HCG > 200 IU/L
Conclusion

- Patients with stage I seminoma have an excellent disease specific survival of 99.5%
- 80% of the patients avoid unnecessary treatment after orchiectomy
- Surveillance is a safe strategy for stage I seminoma patients