TREATMENT OF RELAPSED DISEASE

Following achievement of complete remission with chemotherapy for metastatic testicular cancer, relapse is very unlikely. It occurs in less than 10% of patients with good prognosis disease, but is more likely in patients with more advanced disease.

There are two broad approaches which may be adopted to manage patients with relapsed disease; standard-dose salvage or high-dose chemotherapy (HDCT).

D	**The International Prognostic Factors Study Group's model should be applied to guide prognostic information for patients who relapse after first line platinum based chemotherapy.**
B	**High-dose chemotherapy is not routinely recommended as salvage therapy for germ cell cancer patients who relapse after standard platinum based chemotherapy.**

LATE TOXICITY

Oncologists

☑	Oncologists should advise survivors of testicular cancer and their GPs of the increased risk of cardiovascular disease and non-germ cell second malignancies. Risks are greatest for those treated before age 30 years. Increased risks continue beyond 15 years following treatment.

GPs

☑	GPs should reinforce advice to survivors of testicular cancer on prevention of cardiovascular disease as outlined in SIGN 97, particularly avoidance of smoking.
☑	There should be increased awareness of the risk of haematological malignancies especially after chemotherapy and solid malignancies in or near the fields of radiotherapy. There should be a low threshold for further investigation and appropriate referral to secondary care if any alert symptoms are reported. Annual urinalysis for haematuria may be considered.

Patients

☑	Patients should remain vigilant of any unusual or alert symptoms, particularly relating to the gastrointestinal, respiratory or urinary tract, and report these promptly to their GPs.

This Quick Reference Guide provides a summary of the main recommendations in **SIGN 124 Management of adult testicular germ cell tumours.**

Recommendations are graded **A B C D** to indicate the strength of the supporting evidence.

Good practice points ☑ are provided where the guideline development group wishes to highlight specific aspects of accepted clinical practice.

Details of the evidence supporting these recommendations can be found in the full guideline, available on the SIGN website: **www.sign.ac.uk**

SIGN
Scottish Intercollegiate Guidelines Network
Part of NHS Quality Improvement Scotland

NHS Quality Improvement Scotland

124 Management of adult testicular germ cell tumours

Quick Reference Guide

March 2011

COPIES OF ALL SIGN GUIDELINES ARE AVAILABLE ONLINE AT WWW.SIGN.AC.UK

PRESENTATION AND REFERRAL

Presenting symptoms/history of patients with testicular cancer include:

- a painless, solid, unilateral mass in the scrotum (majority of cases)
- enlarged testicle
- scrotal pain (20% of cases)
- backache (10%)
- gynaecomastia (7%)
- dragging sensation in the scrotum
- incidental recent trauma (It is not thought that the trauma causes the cancer, but rather that it brings an existing tumour to the attention of the patient and physician).

☑
- Patients presenting with a swelling in the scrotum should be examined carefully and an attempt made to distinguish between lumps arising from the body of the testis and other intrascrotal swellings.
- An ultrasound, if available at this stage, should be performed to make a distinction.

D **Those patients suspected of harbouring a testicular malignancy, ie a lump in the testis, doubtful epididymo-orchitis or orchitis not resolving within two to three weeks, should be referred urgently for urological assessment.**

PRIMARY MANAGEMENT

Preoperative investigation

D **Preoperative investigations should include assay of AFP, HCG, and LDH, bilateral testicular ultrasound, and a chest X-ray.**

☑ Patients with metastases where the diagnosis is not in doubt, on account of high markers and the presence of a testicular mass, may be referred for immediate chemotherapy. In such cases, when examination or ultrasound scan demonstrates that there is a testicular tumour, delayed orchidectomy should be performed, either at the time of excision of residual masses or following chemotherapy, for those patients who are not undergoing additional surgery.

Surgical management

D **Where possible an inguinal orchidectomy should be performed.**

D **A testicular prosthesis should be offered to all patients.**

Fertility issues

D **When appropriate, sperm storage should be offered to men who may require chemotherapy or radiotherapy.**

Nursing care

☑ Clinical specialist nurse involvement is recommended as early as possible in the management of patients with testicular germ cell tumours.

Referral to oncology

D **Following confirmation of a germ cell tumour, all patients should be referred to a specialist centre for the management of testicular tumours.**

MANAGEMENT OF THE CONTRALATERAL TESTIS

Diagnosis of carcinoma in situ

D **Patients with a testicular cancer who are 30 years old or less and have a small** *(< 12 ml)* **contralateral testis should be considered for biopsy of the contralateral testis to diagnose CIS. If CIS is identified subsequent management should be in a specialist centre.**

Management of carcinoma in situ

D **Patients with biopsy-proven CIS of the contralateral testis should have the options of surveillance, prophylactic orchidectomy and adjuvant radiotherapy discussed with them. Where radiotherapy is given, a dose of 20 Gy in 10 fractions over two weeks is adequate to eradicate CIS and testosterone replacement may not be necessary.**

CLINICAL STAGING

☑ All patients should be staged and allocated a prognostic group according to the IGCCC classification.

MANAGEMENT OF STAGE I DISEASE

Seminoma

C **Patients with stage I seminoma should have the advantages and disadvantages of the various post-orchidectomy management options discussed with them, including surveillance, single-dose adjuvant carboplatin and adjuvant radiotherapy.**

A **In patients with stage I seminoma who are to receive adjuvant 'dog-leg' or para-aortic strip radiotherapy, a dose of 20 Gy in ten fractions over two weeks be prescribed to the International Commission on Radiation Units** *(ICRU)* **reference point.**

C **The potential risk of second malignant neoplasms should be outlined to patients where adjuvant radiotherapy is being considered.**

Stage I NSGCT and mixed seminoma/NSGCT

C **Patients with stage I NSGCT or mixed seminoma/NSGCT of the testis with no high-risk features should be managed by surveillance following inguinal orchidectomy.**

B **In low-risk patients under surveillance, CT scanning at three and 12 months post-orchidectomy is recommended.**

☑ Patients on surveillance should be seen in a designated clinic following a strict protocol.

D **Two courses of adjuvant BEP chemotherapy should be offered to patients with stage I NSGCT or mixed seminoma/NSGCT of the testis following inguinal orchidectomy if high-risk features are present** *(blood vessel and/or lymphatic invasion)* **or if the patient is unable or unwilling to comply with a policy of surveillance.**

MANAGEMENT OF METASTATIC DISEASE - SEMINOMA

Stage IIA/B seminoma

☑ In stage IIA seminoma both chemotherapy and radiotherapy treatment options should be considered and discussed with the patient. The optimal treatment for an individual patient will depend on clinical judgement and patient preference.

Stage IIC/D seminoma

C **For patients with stage IIC and IID seminoma, chemotherapy is the recommended initial treatment.**

Stage III and IV seminoma

C **Patients with stage III and IV seminoma should be treated with cisplatin-based chemotherapy.**

B **In patients with stage III and IV seminoma carboplatin should only be used as an alternative to cisplatin in exceptional circumstances.**

MANAGEMENT OF METASTATIC DISEASE - NSGCT

Good prognosis disease

A **Patients with good prognosis metastatic non-seminomatous germ cell tumour should receive three cycles of BEP chemotherapy in either a 3-day or 5-day schedule.**

A **Patients with good prognosis metastatic non-seminomatous germ cell tumour and in whom bleomycin is contraindicated should receive four cycles of EP chemotherapy** *(with 500 mg m^2 etoposide and 100 mg/m^2 cisplatin per cycle).*

Intermediate/poor prognosis disease

B **Outwith the trial setting standard initial chemotherapy for patients with intermediate and poor-risk germ cell tumours is four courses of 5-day BEP.**

MANAGEMENT OF RESIDUAL MASSES AFTER CHEMOTHERAPY

Radiological imaging for residual mass

☑
- In patients with a residual mass post-chemotherapy, FDG-PET/CT is not routinely recommended, however may be used as a problem solving tool.
- FDG-PET/CT scans should not take place less than two weeks after chemotherapy due to false positives secondary to inflammatory responses.

Surgery

D **Patients with NSGCT who have residual masses after chemotherapy and whose markers have normalised should be treated by complete excision.**

Radiotherapy

D **Patients with seminoma who have residual masses following chemotherapy can generally be managed by a policy of observation rather than radiotherapy.**