NOTE: Consider Clinical Trials as treatment options for eligible patients.

The chemotherapy regimens recommended are intensified by both dose and schedule, which often requires the specialized monitoring and management provided at a comprehensive cancer center.

INITIAL EVALUATION

- History and Physical
- CBC, differential, platelets, total protein, albumin, calcium, total bilirubin, alkaline phosphatase, LDH, SGPT, sodium, potassium, chloride, CO₂, and coagulation battery
- Plain films of primary
- CT of primary
- MRI of primary
- Bone Scan
- CXR and CT chest
- PET scan (exploratory)
- Core needle biopsy if not done outside
- Histology review by Bone Tumor Pathologist
- Screening MRI of Spine for small cell
- EKG and Cardiac Scan (MUGA or ECHO) if history of cardiac disease
- CVC
- Sarcoma Planning Conference

TREATMENTS

(NOTE: see page 3 for chemotherapy regimen references)

Metastasis?

- Yes → See Page 2
- No
  - Small cell?
    - Yes
      - Doxorubicin, Ifosfamide and Vincristine for up to 6 cycles
    - No
      - Resectable?
        - Yes
          - Doxorubicin and Cisplatin for 4 cycles
        - No
          - Radiation Therapy
        - Surgery

Viable tumor?

- Yes
  - Doxorubicin and Ifosfamide for 4 cycles
- No
  - 2-4 cycles of high dose Ifosfamide

Good response: greater than or equal to 95% necrosis

- Yes
  - Doxorubicin and Ifosfamide for 4 cycles
- No
  - Ifosfamide for 6 cycles then high dose Methotrexate for 6 cycles followed by ADIC² as tolerated

SURVEILLANCE

- History and physical:
  - Every 3 months for 2 years then
  - Every 4 months for 2 years, then
  - Every 6 months for 1 year, then
  - Annually
- CBC, differential, platelets, total protein, albumin, calcium, glucose, creatinine, total bilirubin, alkaline phosphatase, LDH and SGPT every visit.
- Plain films of primary at each visit
- For pelvic primaries: MRI and X-ray each visit as H&P above
- Bone scan for symptomatic patients with history of bone metastases.
- CXR each visit as H&P above
- CT scan of chest if chest X-ray equivocal or for surgical planning.
- Sarcoma Planning Conference if further multidisciplinary decisions required.

1 Excluding Chondrosarcoma NOS, Osteosarcoma of Head & Neck
2 ADIC = doxorubicin and dacarbazine

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INITIAL EVALUATION

Metastases

Yes

Small Cell1?

Doxorubicin, Ifosfamide, and Vincristine for up to 6 cycles

Surgery for primary or metastases or radiation therapy

Post-Op Chemotherapy: Ifosfamide and Etoposide (total duration of therapy approximately 12 months)

Surgery for primary or metastases or radiation therapy

Post-operative chemotherapy

No

Doxorubicin and Cisplatin for 4 cycles

Surgery for primary or metastases

Doxorubicin, Ifosfamide and high dose Methotrexate

Surgery for primary or metastases

SURVEILLANCE

(Note: see page 3 for chemotherapy regimen references)

- History and physical:
  - Every 3 months for 2 years then
  - Every 4 months for 2 years, then
  - Every 6 months for 1 year, then
  - Annually
- CBC, differential and platelets annually.
- Total protein, albumin, calcium, glucose, creatinine, total bilirubin, alkaline phosphatase, LDH and SGPT every other visit for 5 years, then annually.
- Plain films of primary at each visit
- CT of primary at end of treatment for pelvic primaries.
- Bone scan for symptomatic patients with history of bone metastases.
- CXR each visit with H&P above
- CT chest if Chest X-ray equivocal or for surgical planning.
- Sarcoma Planning Conference if further multidisciplinary decisions required.

1Small Cell includes the following: Rhabdomyosarcoma, Ewing Sarcoma/Primitive, Neuroectodermal Tumor, Mesenchymal Chondrosarcoma, and Unclassified Small Cell Sarcoma
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SUGGESTED READINGS

**Adriamycin/cisplatin for osteosarcoma:**


**Adriamycin/ifosfamide for osteosarcoma and soft-tissue sarcomas:**

**High-dose ifosfamide for BONE and SOFT-TISSUE sarcoma:**
Adult Primary Bone Sarcoma (High-Grade)¹

NOTE: Consider Clinical Trials as treatment options for eligible patients.

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