Solitary and Extramedullary Plasmacytoma

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant women.

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

INITIAL EVALUATION

- History and physical
- CBC with differential, BUN, creatinine, electrolytes, albumin, LDH, calcium, beta-2-microglobulin, serum quantitative immunoglobulins, serum protein electrophoresis (SPEP), serum immunofixation (SIFE), and serum free light chains (sFLC) including involved/uninvolved sFLC ratio
- 24-hour urine protein electrophoresis (UPEP) and urine immunofixation (UIFE)
- Bone marrow biopsy and aspirate with flow cytometry
- PET/CT of whole body or MRI of whole body
  - If PET/CT of whole body or MRI of whole body is unavailable, then perform skeletal survey and MRI of the cervical, thoracic, lumbar and sacral spine. Consider CT or MRI of the affected area.
- In select settings, other imaging studies may be considered, such as ultrasound for superficial masses
- Lifestyle risk assessment ¹

TREATMENT

Patient’s initial evaluation findings meet criteria for multiple myeloma treatment? (see below)

Yes
- Treat as multiple myeloma (see Multiple Myeloma algorithm)

No
- Treat as plasmacytoma, see Page 2
- Progression to multiple myeloma risk assessment, see Page 2

Criteria for multiple myeloma treatment:
- Anemia, hypercalcemia, renal failure due to multiple myeloma and/or
- Bony lytic lesions due to multiple myeloma in a skeletal survey and/or
  - MRI of whole body and/or PET/CT of whole body and/or
  - sFLC involved/uninvolved ratio ≥ 100 and/or
- Greater than one focal lesions on MRI (each focal lesion must be 5 mm or more in size) and/or
- Percentage of clonal plasma cells is ≥ 60% in the core biopsy by CD138 immunohistochemistry

Note: Treatment may be considered if percentage of clonal plasma cells is ≥ 10% in the core biopsy by CD138 immunohistochemistry

¹ See Physical Activity, Nutrition, and Tobacco Cessation algorithms; ongoing reassessment of lifestyle risks should be a part of routine clinical practice

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FOLLOW-UP SURVEILLANCE

Complete response
- Complete disappearance of paraprotein in serum or urine by immunofixation and normalization of sFLC
- No new bone lesions or other features of multiple myeloma (see Multiple Myeloma algorithm)

Re-evaluate as indicated

Persistent presence of serum paraprotein 1 year after treatment
- Consider more frequent monitoring

Progressive disease
- Restage with myeloma workup
- See Multiple Myeloma algorithm

Evaluate response every 3 months for the first 2 years, then every 6-12 months thereafter:
- CBC with differential, BUN, creatinine, electrolytes, albumin, LDH, calcium, beta-2-microglobulin, serum quantitative immunoglobulins, SPEP, SIFE, and sFLC
- 24 hour urine for total protein, UPEP, and UIFE
- Consider bone marrow biopsy and aspirate, if clinically indicated
- MRI and/or PET/CT at 3 months after completion of ISRT to assess treatment response. Consider skeletal survey and/or MRI and/or CT and/or PET/CT every 6-12 months, if clinically indicated.

CLINICAL PRESENTATION

Solitary plasmacytoma of bone (SPB)
- Treat with involved site radiation therapy (ISRT) to a total dose of at least 40 Gy (regardless of site)\(^1\)
- Multiple myeloma progression risk assessment\(^2\)

Extramedullary plasmacytoma (EMP)
- Plasmacytoma size ≥ 10 cm at diagnosis
- Persistent presence of serum paraprotein 1 year after treatment

PRIMARY TREATMENT

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

\(^1\) Historically, the recommended dose has been at least 40 Gy. More recent data suggests that lower doses may be sufficient. Refer to suggested readings for data regarding ISRT dose.

\(^2\) Risk factors:
- Plasmacytoma size ≥ 10 cm at diagnosis
- Persistent presence of serum paraprotein 1 year after treatment

Rates of progression to multiple myeloma for patients with 1 or 2 risk factors:
- 3 years from diagnosis – 65%
- 5 years from diagnosis – 70%
- 10 years from diagnosis – 82%
SUGGESTED READINGS


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DEVELOPMENT CREDITS

This practice algorithm is based on majority expert opinion of the Myeloma Center providers at the University of Texas MD Anderson Cancer Center. It was developed using a multidisciplinary approach that included input from the following:

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