Maintenance Therapy in a Standard Risk, Non-transplant Eligible Patient

A Case Study

76-Year-Old Female Presents after Initial MM Therapy

History:

- Skeletal evaluation
  - Diffuse lytic bone lesions
  - No extramedullary disease
- Bone marrow: 50% monoclonal lambda plasma cells
- Normal Ca^{2}+ and Cr
- No M-spike on UPEP
- FISH studies: t(11;14) translocation
- Normal cytogenetics
- Initial therapy with MPL (ie, MPR)
- Achieved VGPR

MM=multiple myeloma; Ca^{2+}=calcium; Cr=creatinine; UPEP=urine protein electrophoresis; FISH=fluorescent in situ hybridization; MPL=melphalan/prednisone/lenalidomide; MPR=melphalan/prednisone/Revlimid; VGPR=very good partial response

Considerations

- Generally considered transplant ineligible
  - Lack of data indicating benefit for this age in standard-risk cases with active disease
- Maintenance may not be appropriate
  - Consider comorbidities
  - Consider response to initial therapy

If maintenance is chosen, which is best option?

Bortezomib, lenalidomide, carfilzomib, and pomalidomide are not approved by the US FDA for maintenance therapy for multiple myeloma.

Ludwig H, et al. *Blood*. 2012;119:3003-3015.

Maintenance Options 2013

- ~~Alkylators~~ (not listed by NCCN)
- ~~IFN-alpha~~ (Category 2b)
- ~~Steroids~~ (Category 2b)

- Thalidomide (Category 1)
- Lenalidomide (Category 1)
- Bortezomib (Category 2A)

NCCN preferred maintenance drugs 2013

The US FDA has not approved thalidomide, lenalidomide, bortezomib, IFN-α, alkylating agents, or steroids for use as maintenance therapy for multiple myeloma.

IFN=interferon

National Comprehensive Cancer Network (NCCN). Clinical Practice Guidelines in Oncology: Multiple Myeloma. 2013; version 2.2013. Release date 3/8/2013.

Decision Tree

- Which regimen, based on history, biology, cytogenetics?
  - Lenalidomide or bortezomib are acceptable options; patient is standard risk
  - Thalidomide ruled out based on cumulative risk of peripheral neuropathy and patient's age
  - Patient educated regarding the pros/and cons of both bortezomib and lenalidomide including lenalidomide-associated risk of second primary malignancies
- Lenalidomide was chosen as maintenance therapy
  - Physician preference was to continue with lenalidomide since the response was good (VGPR) after 9 cycles of MPR and desire was to maintain the response
  - Patient preference was for lenalidomide, oral route was deemed more convenient, fewer office visits required
- Dose: 15 mg/d for 21 out of 28 days (follow your institutional protocols for dose and schedule, duration of therapy, and side-effect monitoring and management planning)

Ludwig H, et al. *Blood*. 2012;119:3003-3015.; Palumbo A. *N Engl J Med.* 2012;366(19):1759-1769.

Decision Tree

- Duration of therapy?
  - Up to two years or until progression or patient can no longer tolerate; after two years re-evaluate
- Side-effect and comorbidity management plan
  - Side-effect threshold (not to exceed grade 1); aspirin 81 mg/d prophylaxis for VTE, monitor for myelosuppression, observe for hyperglycemia, counsel patient regarding asthenia and instructions should constipation occur; continue zoledronic acid up to 2 years and re-evaluate; continue to monitor for second primary malignancies

VTE=venous thromboembolism

Ludwig H, et al. *Blood*. 2012;119:3003-3015.; Palumbo A. *N Engl J Med.* 2012;366(19):1759-1769.