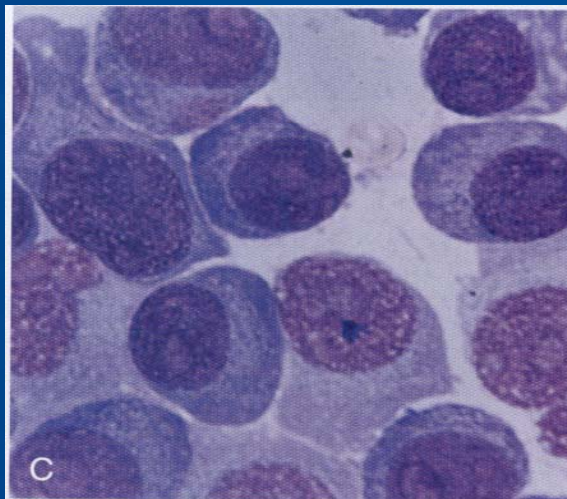
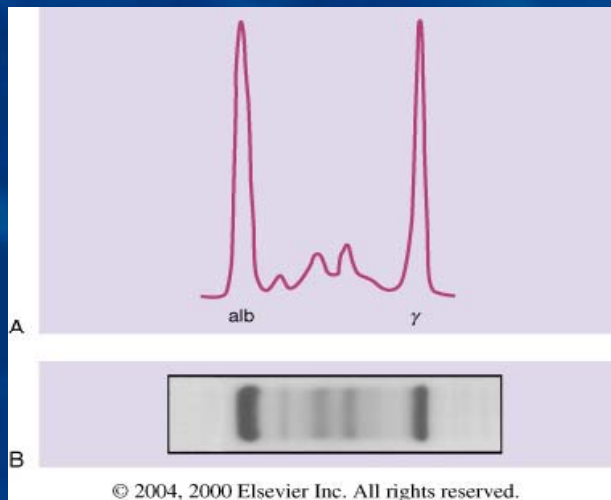


# The Multidisciplinary Team Approach: Managing the Newly Diagnosed Patient Case Study



# Initial Presentation

- 45-year-old woman
- $\kappa$  light chain multiple myeloma diagnosed January 2001
  - Durie-Salmon Stage IIIA, ISS Stage 2
- Laboratory findings
  - Total proteinuria 5.82 g/day
  - Bence Jones protein (BJP) 3.6 g/day
  - Hypogammaglobulinemia
  - Albumin 3.9 g/dL
  - $\beta$ 2-microglobulin 4.7 mg/L
  - Creatinine 1.7 mg/dL
  - No paraprotein peak but kappa light chain 120000 with lambda light chain at 0.01
  - Kappa/lambda ratio=12000000

# Initial Presentation

- Bone marrow biopsy
  - Cellularity 80% with 25% plasma cells
  - Cytogenetics 46, XX, inversion 9 (p11;q13)
- FISH no abnormalities
- Skeletal survey: extensive lytic bone disease with healing fractures of left 7<sup>th</sup> and the 8<sup>th</sup> ribs
- MRI of the spine: diffuse hyperintense homogenous signal on STIR sequence
- MRI of the pelvis: diffuse marrow infiltrative changes due to myeloma
- Comorbidities: diabetic on metformin, no history of coronary artery disease or other comorbidities

FISH=fluorescence in situ hybridization; MRI=magnetic resonance imaging; STIR=short tau inversion recovery

# Important Questions to Consider

- How do we treat this patient?
- What are her risk factors?
- Is she a candidate for transplant?
- What are the special considerations for treating this patient based on her comorbidities and disease characteristics?

# Primary (Induction) Therapy

- Treatment
  - She begins treatment with bortezomib 1.3 mg/m<sup>2</sup> subQ d1, 4, 8, 11 with dexamethasone 20 mg d1, 2, 4, 5, 8, 9, 11, 12 and lenalidomide\* 25 mg daily days 1 through 14
- Three weeks afterwards she appears in the emergency room with fevers and is somewhat disoriented
  - ANC 1000 neutrophils per microliter
  - Platelets 75000
  - Glucose 300 mg/dL
  - Creatinine 2.0 mg/dL

**\*Lenalidomide is not approved by the FDA for use as first-line induction therapy for multiple myeloma**

ANC=absolute neutrophil count

# Considerations

- What has occurred as a consequence of this patient's treatment?
- What are the next steps?

## Cycles 2-4

- The subsequent cycles of RVD are given at the following doses
  - Bortezomib 1.3 mg/m<sup>2</sup> 1-4-8-11
  - Dexamethasone 20 mg 1-4-8-11
  - Lenalidomide 15 mg daily d1-14
- She has been seen by the endocrinologist and the diabetic nurse who instruct her on home glucose monitoring and sliding scale insulin administration
- Next 3 cycles are uneventful with nadir ANC of 1500 and good glycemia control
- During the last cycle she complains of emerging numbness and tingling of the lower extremities (grade 1)

RVD=lenalidomide, bortezomib, and dexamethasone



# Considerations

- Since this patient has just completed her primary induction therapy, how would you address her low grade (grade 1) symptoms of peripheral neuropathy?
  - Do you need to do anything now?
  - What future considerations might you face for her treatment post-autologous stem cell transplant with her history of peripheral neuropathy, if any?
  - Does this patient need to go for ASCT immediately or can the patient wait?
- If she decides to go for immediate ASCT, what about monitoring her renal function in regards to high-dose melphalan therapy given her previous history of renal impairment?

ASCT=autologous stem cell transplant



# Stem Cell Collection

- She has achieved a VGPR with kappa light chains reduced to 10 and lambda light chains recovered to 0.1
- Her marrow reveals 4% kappa restricted plasma cells
- MRI demonstrates significant resolution of infiltrative images
- She agrees to proceed to stem cell collection and transplantation

VGPR=very good partial response

# Post Auto SCT

- She undergoes an autologous SCT without complications and achieves a CR (complete response) without evidence of kappa restricted plasma cells in marrow, negative immune fixation in blood and urine, and normal kappa/lambda ratio
- MRI shows almost complete normalization of infiltrative lesions
- She now asks the question of maintenance and consolidation

SCT=stem cell transplant

- How would you educate this patient and what suggested next steps would you offer regarding consolidation and maintenance therapy?
  - She has achieved a CR post-transplant, does she need consolidation therapy?
  - Which patients should be considered for maintenance therapy?

- Be sure to view the accompanying multidisciplinary conversation regarding the management of this patient with Sergio Giralt, MD; R. Donald Harvey III, PharmD, FCCP, BCPS, BCOP; and Beth Faiman, RN, MSN, APRN-BC, AOCN®