Multiple Myeloma

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Multiple Myeloma: Summary of Disease Characteristics

- Malignant plasma cell disorder affecting the bone marrow
- Estimated yearly incidence: 15,000 cases
  - Median survival: ~ 3 years
- Early stage disease often asymptomatic; common symptoms include
  - Kidney dysfunction, pain, fatigue, recurrent infection, CNS dysfunction

Current Standards of Care

- Initial treatment of patients < 65 years of age, good organ function
  - High-dose chemotherapy, autologous SCT; median OS: 54 months$^{[1]}$
  - Older patients unlikely candidates for SCT

- Other active therapies in frontline and relapsed/refractory settings
  - Alkylators: cyclophosphamide, melphalan
  - Corticosteroids: dexamethasone, prednisone
  - Immunomodulating agents: thalidomide, lenalidomide
  - Proteasome inhibitors: bortezomib
  - Anthracyclines: doxorubicin, pegylated doxorubicin

Treatment of Multiple Myeloma: Unanswered Questions

- Optimal induction regimen
  - Combinations of active therapies
  - Bortezomib + dexamethasone or PLD
  - Lenalidomide + dexamethasone or MP

- The emerging role of maintenance

- Transplantation issues: is delayed second transplantation feasible?

- Relapsed/refractory disease: combinations of various active therapies being investigated

- Most effective regimen for plasma cell disorders not yet determined
1 - HDT versus CC?
2 - Which preparative regimen?
3 - Double transplantation?
4 - Maintenance therapy after HDT?
5 - Allogeneic transplant?
**First-Line Therapy in MM: Introduction**

- **ASCT**: standard of care for adults < 65 years of age with MM
  - Best response with initial therapy, followed by high-dose chemotherapy, then ASCT
- Patients > 65-70 years of age unlikely candidates for ASCT
- Optimal induction regimen not determined
  - Some regimens (i.e., VAD) associated with low response and significant toxicity
- In recent years, many new active agents incorporated into treatment regimens for MM
  - Studies presented at ASH 2006 evaluated various agents in front-line, induction settings

Tandem ASCT vs Delayed Second ASCT in MM

- Double ASCT established as option in first-line therapy of MM\(^1\)
  - Patients < 60 years of age with suboptimal response to first transplant

- Maintenance thalidomide after double ASCT improves survival\(^2\)

- Abdelkefi and colleagues\(^3\) investigated upfront tandem ASCT vs single ASCT + maintenance
  - Late second ASCT in maintenance group