



Treatment Patterns Among Patients with Recently-Diagnosed Multiple Myeloma in a National Registry

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BACKGROUND

Patterns of treatment among patients with recently-diagnosed multiple myeloma have not been described on a population basis. This is of particular interest with the introduction of novel anti-myeloma therapies in the last several years.

METHODS

The Patient Registries at Slone: Myeloma is a national disease-based observational registry conducted by the Slone Epidemiology Center at Boston University.

- All patients diagnosed with myeloma within four months of enrollment are eligible for inclusion.
- Subjects self-enroll by mail, telephone, or over the internet.
- Subjects complete questionnaires at baseline and every 6 months thereafter to provide information on treatment, clinical events, and quality of life.
- Medical records are requested at baseline and every 6 months thereafter with a patient release and are abstracted by registry staff.
- The project is approved by the Boston University Medical Campus IRB.

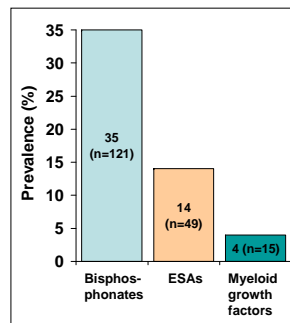
The present analysis was based on 341 patients with multiple myeloma who were enrolled from June 2006-October 2008 and completed a baseline questionnaire within 6 months of diagnosis (median, 69 days; range, 4-171 days); 13 patients with MGUS or smoldering myeloma were not included. Treatment received at any time during the period from diagnosis to completion of the baseline questionnaire is reported here. A comparison of patient-reported information on treatment with what was recorded in medical records showed good agreement; the questionnaire information was used here, allowing a larger number of subjects to be included.

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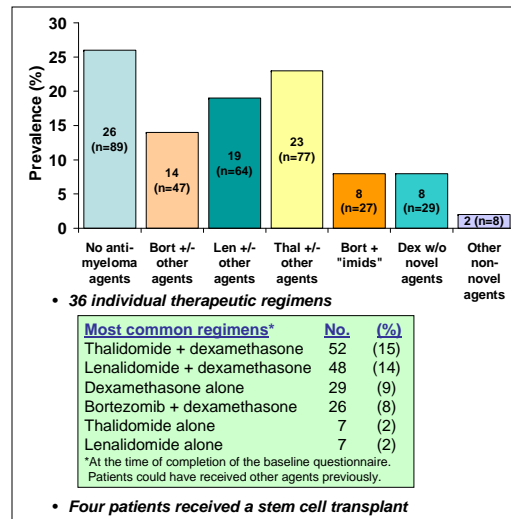
Characteristics of 341 Patients with Multiple Myeloma

| | No. | (%) |
|---------------------|-----|---------|
| Male | 200 | (59) |
| Female | 141 | (41) |
| Age (median, range) | 61 | (30-86) |
| Residence | 43 | states |
| Race/ethnicity | | |
| Non-Hispanic white | 278 | (82) |
| African American | 23 | (7) |
| Other | 40 | (12) |
| Education | | |
| <12 years | 16 | (5) |
| HS graduate | 49 | (14) |
| Some college | 97 | (28) |
| College graduate | 109 | (32) |
| Graduate school | 70 | (21) |

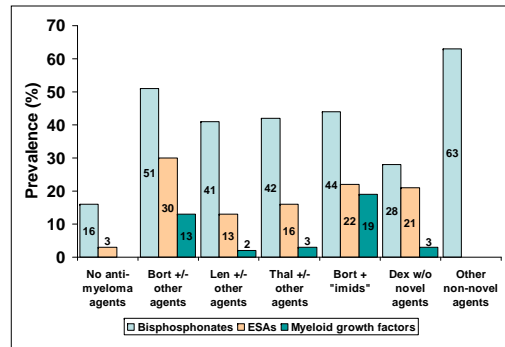
Adjunct Treatment Among 341 Myeloma Patients



Anti-Myeloma Therapy Among 341 Patients



Adjunct Treatment According to Anti-Myeloma Therapy Among 341 Patients



RESULTS

Use of Anti-Myeloma Agents Among 341 Patients According to Sex

| Treatment | Male (n=200) | | Female (n=141) | |
|--------------------------------|--------------|------|----------------|------|
| | No. | (%) | No. | (%) |
| No anti-myeloma agents | 51 | (25) | 38 | (27) |
| Bortezomib +/- other agents | 25 | (13) | 22 | (16) |
| Lenalidomide +/- other agents | 37 | (19) | 27 | (19) |
| Thalidomide +/- other agents | 42 | (21) | 35 | (25) |
| Bortezomib + "imids" | 21 | (11) | 6 | (4) |
| Dexamethasone w/o novel agents | 19 | (10) | 10 | (7) |
| Other non-novel agents | 5 | (3) | 3 | (2) |

Use of Anti-Myeloma Agents Among 341 Patients According to Age

| Treatment | Median Age (yr) |
|--------------------------------|-----------------|
| No anti-myeloma agents | 62 |
| Bortezomib +/- other agents | 56* |
| Lenalidomide +/- other agents | 62.5 |
| Thalidomide +/- other agents | 61 |
| Bortezomib + "imids" | 58 |
| Dexamethasone w/o novel agents | 60 |
| Other non-novel agents | 69 |

*Bortezomib vs. no treatment, p=0.033; lenalidomide, p=0.012; thalidomide, p=0.085; dexamethasone, p=0.065; other non-novel agents, p=0.05.

Other Salient Findings

Race/ethnicity

Thalidomide, 43% of African Americans (10/23) vs. 21% of all others (67/318), p=0.01

Education

No consistent patterns

Region

No anti-myeloma agents, 39% of New England (13/33) vs. 25% of others (76/308), p=0.07

Lenalidomide, 37% of West North Central (7/19) vs. 18% of others (57/322), p=0.04

Thalidomide, 39% of West South Central (9/23) vs. 21% of others (68/318), p=0.05

Dexamethasone w/o novel agents, 17% of Mountain + East North Central (13/75) vs. 6% of others (16/266), p=0.01

Prescription drug insurance

90% of patients have insurance (306/341)

No material differences in treatment according to insurance

Secular trends, Jun-Dec 2006 through Jan-Jun 2008

Increase in use of lenalidomide, 5%-31%

Decrease in use of thalidomide, 32%-14%

Decrease in use of dexamethasone w/o novel agents, 11%-4%

COMMENT

These results from a national registry show that the initial choice of treatments in multiple myeloma covers a wide range of therapeutic combinations. Most patients receive one or more of the newer therapies within six months of diagnosis. Other noteworthy findings include:

- Although fully three-fourths of patients are treated with novel or other anti-myeloma agents, only one-third report the use of bisphosphonates.
- Adjunct treatment is much more common among patients who receive anti-myeloma agents.
- African American patients are more likely to receive thalidomide than patients of other racial/ethnic groups.
- There are regional differences in the choice of treatment, perhaps reflecting the programs at major research institutions in different parts of the country.
- Socioeconomic status as measured by education and prescription drug insurance does not appear to have a material impact on initial therapy.