The Role of Naturopathic Medicine In Treating Multiple Myeloma

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Naturopathic Education

- Pre-requisite: pre-med undergraduate degree
- 4 years Naturopathic medical school
- Basic medical science and clinical Board Exams
- Selective Residency or 5+ years experience
- Board Certification in Naturopathic Oncology
The Cancer Treatment Centers of America Naturopathic Medicine Department:

- consults with patients on the use of natural and some pharmacologic therapies by oncology patients.
- provides appropriate, effective, scientifically based natural medicine support for oncology patients undergoing conventional care and follow-up.
Naturopathic Therapies

- Vitamins
- Minerals
- Botanical Medicine
- Homeopathy
- Acupuncture

Hierarchy of Needs: air > water > calories > protein > macronutrients > micronutrients
Multiple Myeloma - Plasma Cell Dyscrasias

Plasma Cell Dyscrasias

- MGUS*
- MM*
- Amyloidosis
- NHL
- Other B Cell lymphoproliferative disorders
- SMM*
- Waldenstrom's
- Solitary Plasmacytoma
## Multiple Myeloma Diagnostic Criteria

<table>
<thead>
<tr>
<th></th>
<th>MGUS</th>
<th>SMM</th>
<th>Plasma-cytoma</th>
<th>Multiple Myeloma</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Monoclonal bone marrow plasma cells</strong></td>
<td>&lt;10%</td>
<td>≥10% and/or a tissue biopsy</td>
<td>single site</td>
<td>&gt;10%</td>
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<tr>
<td><strong>M protein in serum or urine</strong></td>
<td>&lt;3 g/dL</td>
<td>≥3 g/dL</td>
<td>Low</td>
<td>&gt;3 g/dL</td>
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<tr>
<td><strong>Myeloma-related organ dysfunction</strong></td>
<td>None</td>
<td>None</td>
<td>None</td>
<td><strong>Organ damage</strong></td>
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</tbody>
</table>
Conventional Care- watch and wait/surveillance

Naturopathic Care- shines at this point as patients are able to utilize a broader range of supplements without the risk of CI as they are not taking chemotherapeutic agents.

Naturopathic Goals:

- Increase time to progression/prevent disease progression
- Intervene to prevent organ damage (bone lesions, renal compromise)
- Essentially increase one’s normal life before disease management is necessary
MGUS & SMM – Therapies

- Curcumin promising research*
  - 4 gr. qd decreased paraproteins by 50% in pts >20g/L by 12%-30% in just 7 days

- Resveratrol promising research**
  - promotes osteoblastic activity and increases sensitivity to Vit D
  - down-regulates several pathways leading to progression of disease (STAT-3, Nfκappa-B, BCL-2 & BCL-xl) and increases MM cell death.

- Bone Support
- Renal Support

* PMID 19737963  **PMID 17164350, 16490592, 16267019, 17049120
Primary therapy for transplant patients:

- Bortezomib, Lenolidomide, Thalidomide or Cyclophosphamide in combination with dexamethasone
- Most common side effects: fatigue, nausea, diarrhea, low platelets, anorexia, anemia, CIPN, limb and joint pain, low WBC, headache, insomnia, peripheral edema, dizziness, rash, constipation
Multiple Myeloma – Goals of Naturopathic Care

- Prevent Herb-Drug-Nutrient Interactions
- Manage side effects of treatment
- Work with pt to increase strength and stamina
- Improve response to treatment
- Improve Quality of Life
- Empower the patient through education and options
- Make appropriate referrals as necessary
Pain and Inflammation:

- **Ginger** - anti-inflammatory for pain and myalgias and may also inhibit RANKL, which leads to bone loss. *Cancer Res.* 2009 Feb 15;69(4):1477-84.

- **Boswellia** - boswellic acids are anti-inflammatory and may prove to have antiproliferative effects in MM. *Mol Cancer Res.* 2009 Jan;7(1):118-28

- **Proteolytic Enzymes** – Slovakian researchers have found more rapid onset of and longer remissions in conjunction with other therapies. *Vnitr Lek.* 1992 Sep;38(9):921-9.

- **Acupuncture**
Improving Overall Health and Stamina:

- Regular Exercise, PT consult as necessary
- Dietary interventions- whole foods, protein packed foods, fruits and veggies, water, fiber or nutrition shakes prn
- Mind/Body support
- Siberian ginseng for fatigue (*Alt Ther 2001;7:S14*)
Digestive Upset: nausea, diarrhea, constipation

- Ginger
- L-glutamine
- Probiotics
- Magnesium
- Digestive enzymes
- MiraLax or Imodium
Naturopathic Medicine has much to offer patients living with Multiple Myeloma and may help with side effect management and quality of life.

It is very important to work with a healthcare professional with expertise in both cancer and natural products to prevent herb-drug-interactions.

Naturopathic physicians are a great resource to provide expert advice and ensure safety.
American Association of Naturopathic Physicians:  
www.naturopathic.org

Oncology Association of Naturopathic Physicians:  
www.oncanp.org

Cancer Treatment Centers of America:  
www.cancercenter.com
Naturopathic Medicine

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