PG-SGA: Key to Interdisciplinary Prevention and Treatment of Malnutrition

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Michael Douglas – What do you see?
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**Anabolic Competence Paradigm: Multimodality, Interdisciplinary Approaches**

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**Anabolic Competence:**
That state which optimally supports protein synthesis and lean body mass, as well as global aspects of muscle & organ function, immune competence, and quality of life and quality of survivorship.

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**Definitions and Implications**

- **Anabolic Competence:**
  - The state that optimally supports anabolism, i.e., protein synthesis and lean body mass, as well as global aspects of organ function, immunocompetence, functionality and quality of survivorship.

- Simple starvation vs catabolic weight loss
Lung Cancer: Success or Failure?

Catabolic & Anabolic Forces

Tumor / Host
- Proinflammatory cytokines
- Anorexia

Therapy
- Perioperative catabolism
- Neutropenic fevers, infection
- Cytokine-mediated responses

Other
- Mechanical, physiologic impediments to intake, digestion, absorption
- Inactivity, bedrest, muscle loss
- Pulmonary insufficiency

Pharmacological
- Exogenous corticosteroids

Tumor / Host
- Anti-cachectic cytokines

Therapy
- Surgical resection
- Complete response
- Resolution of inflammatory reactions

Other
- Resolution of impediments to intake, digestion, absorption
- Enteral nutrition
- Parenteral nutrition with insulin
- Resistance exercise

Pharmacological
- Anabolic – oxandrolone
- Anticatabolic – COX-2 inhibitors/NSAIDS, EPA
Defining Critical Weight Loss

<table>
<thead>
<tr>
<th>Time Course</th>
<th>Degree of Weight Loss</th>
<th>Common Toxicity Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Significant</td>
<td>Severe</td>
</tr>
<tr>
<td>1 week</td>
<td>≤ 2%</td>
<td>&gt; 2%</td>
</tr>
<tr>
<td>1 month</td>
<td>≤ 5%</td>
<td>&gt; 5%</td>
</tr>
<tr>
<td>3 months</td>
<td>≤ 7.5%</td>
<td>&gt; 7.5%</td>
</tr>
<tr>
<td>6 months</td>
<td>≤ 10%</td>
<td>&gt; 10%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Blackburn et al. JPN 1977

Implications of Catabolism & Unintentional Weight Loss across Medical Conditions

Weight loss as little as 2%–5% is associated with:

- Decreased performance status
- Increased fatigue
- Decreased quality of life
- Increased therapy toxicity
- Increased risk of dose modification, treatment delays
- Decreased overall and progression-free survival
- Decreased patient compliance and completion of planned therapy
Lean Tissues: Functional Issues

**Skeletal Muscle**
- ↑ Fatigue
- ↓ Activity
- ↑ Bed rest
- ↑ Risk DVT, PE
- ↑ Decubitus risk
- ↓ Ability to cough
- ↓ Ability to clear pulmonary secretions

**Smooth Muscle**
- Delayed gastric emptying
- Delayed intestinal transit
- Loss of cardiovascular responsiveness and stability

**Other Components**
- ↓ Visceral protein
- ↓ Antibodies
- ↓ Growth Factors
- Altered enzymes

---

**Global Assessment of Nutritional Status**

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1984</td>
<td>Evaluating accuracy of nutritional assessment techniques applied to hospitalized patients: methodology &amp; comparisons using the Subjective Global Assessment (SGA) developed at the University of Toronto</td>
</tr>
<tr>
<td>1987</td>
<td>Original SGA published in usable format</td>
</tr>
<tr>
<td>1993</td>
<td>Oncology modification by Ottery</td>
</tr>
<tr>
<td>1995</td>
<td>Patient-Generated SGA (PG-SGA) in unscored format</td>
</tr>
<tr>
<td>1996</td>
<td>Spanish &amp; French PG-SGA, Scored PG-SGA; Multi-site validation of scoring and triage in volunteer research network of the Society for Nutritional Oncology Adjuvant Therapy (NOAT); incorporation of the Scored PG-SGA in the American Dietetic Association's Medical Nutrition Therapy across the Continuum of Care</td>
</tr>
<tr>
<td>1997</td>
<td>Multiple other translations by individual permissions</td>
</tr>
<tr>
<td>2002</td>
<td>Australian &amp; other international research groups</td>
</tr>
<tr>
<td>2005</td>
<td>BIG PRINT version, fatigue added</td>
</tr>
<tr>
<td>2013</td>
<td>Initial interactions with Harriet Jager-Wittenaar, PhD, RD, Hanze UAS and Tizin Mobil utilizing the first validated and cross-culturally adapted language translation</td>
</tr>
<tr>
<td>2014</td>
<td>Beta launch of multilingual Pt-Global app; launch of PG-SGA/Pt-Global Platform and <a href="http://www.pt-global.org">www.pt-global.org</a> website</td>
</tr>
<tr>
<td>2015</td>
<td>Initiation of several regional and country-specific volunteer global translation networks; launch of Portuguese PG-SGA &amp; website; Ottery inauguration as Visiting Professor at Hanze UAS, Groningen, The Netherlands</td>
</tr>
</tbody>
</table>

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**Bibliography for Speech Therapists**

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Hanze UAS 13 Jun 2017
Clinical Evolution: Easier to Read, Less Intimidating

Clinical Evolution: Multilingual App - Quick and Easy

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Welke van deze patiënten is ondervoed?

Patiënt 1
Vak 1-4 Score: 16

Patiënt 2
Vak 1-4 Score: 4

Patiënt 3
Vak 1-4 Score: 16

Hogere score = hoger risico of tekort/verlies

The photograph is representative of the case presentation included and is used as an example for illustration purposes only.

Example 1

The photograph is representative of the case presentation included and is used as an example for illustration purposes only.
Acknowledgments

Major 9601 Sites
- AR: St Mary’s Regional Med Center
- CO: Denver VA Medical Center
- HI: Queen’s Medical Center
- IA: Central Iowa Oncology
- IL: Ingall’s Memorial Hospital
- IL: St. Anthony’s Medical Center
- KS: Hays Medical Center
- KY: Baptist East Radiation Center
- KY: Central Baptist Medical Center
- MD: NIH Clinical Center
- MD: U of Maryland-Thoracic Surgery Div
- ME: MidMaine Medical Center
- MI: Karmanos Cancer Institute
- MI Munson Medical Center
- MO: St. Johns Mid America Cancer Center
- NJ: Cooper Medical Center
- NY: Vassar Bros. Hospital
- NY: Calvary Hospital Hospice
- OH: Med Central Health System
- OK: Cancer Care Assoc of OK
- OK: Cancer Treatment Center of OK
- OR: Willamette Medical Center
- PA: U. of Pittsburgh
- PA: St. Lukes Hospital
- PA: Hahne Valley Cancer Center
- RI: Women’s & Infants Hospital, Program in Women’s Oncology
- TN: U of Tenn Medical Center
- TX: CliffView Dialysis
- WI: Gunderson Lutheran Medical Center
- AU: The Wesley Hospital, Queensland, Australia
- CA: North Eastern Ontario Regional Cancer Ctr (Canada)
- MX: National Medical Center Siglo XXI (Mexico)

International Collaborators:
- Austria, Australia, Belgium, Brasil, Canada, Denmark, France, Germany, Greece, Indonesia, Iran, Italy, Japan, Korea, Netherlands, Norway, Poland, Portugal, Switzerland, Thailand, United States, others
- Particularly, Harriët Jager-Wittenaar, RD, PhD, Martine Sealy, RD, MSc, Susan DeBolt, PhD, RD & Suzanne Kasenic, RD, CSO, LDN

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PG-SGA: Hanze 2017


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PG-SGA: Head & Neck Cancer


**PG-SGA: Head & Neck Cancer**


PG-SGA: Head & Neck Cancer


PG-SGA: Esophageal Cancer


PG-SGA: Dysphagia


PG-SGA: Chronic Graft vs Host Disease (cGVHD)


PG-SGA: Stroke


