

Cachexias: A 2007 State of The Art Review of Metabolic and Biochemical Abnormalities In Different Clinical Models of Cachexia



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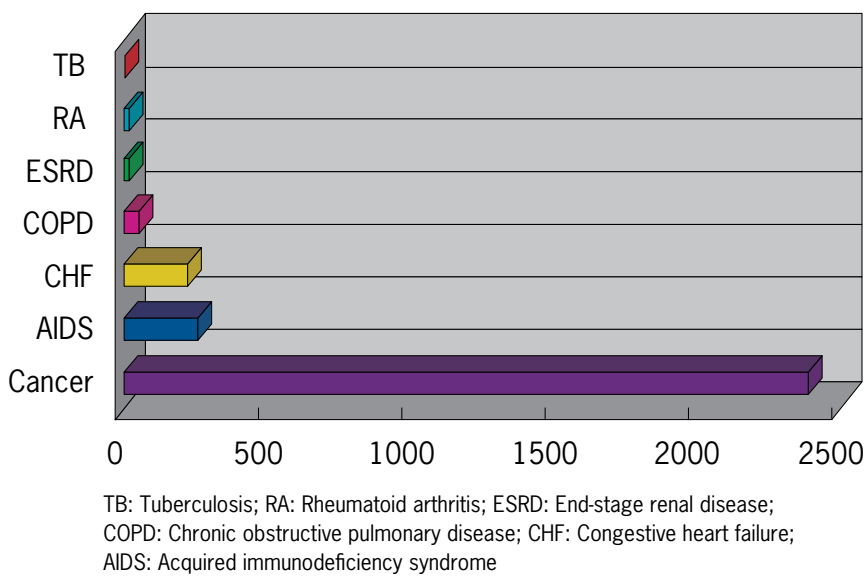
Introduction

- Cachexia occurs in different chronic diseases (**Figure 1**)
- We compared cachexia in different clinical settings

Methods & Results

- PubMed/ Medline search limited to English
- **Figure 1** shows search results for “cachexia” combined with specific disease

Figure 1: Number of References for “Cachexia” AND Disease



Discussion

- No definition of cachexia; a major hurdle for research
- Loss of both lean body and fat mass is common to most cachexias
- All cachexias are multifactorial
- Inflammation is a common component
- Pro-inflammatory cytokines involved in different aspects of cachexia
- Hypermetabolism (\uparrow REE) is usual (**Table 1**)
- Anorexia:
 - Present in most except RA
 - Not necessary for wasting
- Cachexia resists nutritional support (except AIDS)
- Some differences between cachexias are inherent to the disease and management:
 - AIDS: Hypogonadism and lipodystrophy
 - ESRD: Uremic syndrome
 - Cancer: Unique Tumor-host interactions

Conclusions

- Cachexia research is limited compared to its prevalence in many disorders
- Inflammation is pivotal in pathophysiology of all cachexias
- A unified definition is needed

Table 1: Metabolic Changes in Cachexias

Characteristics	Starvation	Cancer	AIDS	CHF	RA	COPD	ESRD
Caloric Intake	↘	— or ↘	↘	↘	—	~	↘
Response to Feeding	Yes	No	Yes	~	No	~	No
TEE	↘	↘	— or ↘	— or ↘	↘	↘	LD
REE	↘	~ ↗	~ ↗	↗	↗	↗	↗
Lipolysis	↗	↗	↗	↗	LD	LD	LD
Protein Breakdown	↘	↗	↗	↗	↗	↗	↗
Glucose	No	Yes	Yes	Yes	Yes	LD	↗

↗ Increase; ↘ Decrease; — No change; ~ Varies; LD: Limited data TEE/ REE: Total/ Resting Energy Expenditure