Giovanni Mantovani (Ed)
Cachexia and Wasting: A Modern Approach
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Cachexia and Wasting: A Modern Approach

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Cachexia may well represent the devastating flip side of the tremendous achievements of modern medicine, as the incidence of cachexia is also a function of survival of chronic illness.

Many diseases – which rapidly led to death only a few years ago – are now better controlled by new therapies. Even if we cannot cure and eradicate these diseases, their natural history has significantly increased by months and years. Although these new therapeutic strategies represent a remarkable advantage over the previous standards of care, it is impossible to ignore the fact that many more patients are now facing the nutritional and metabolic consequences of prolonged immunological and hormonal challenges due to both the illness process itself and the aggressive therapies.

This book aims to conceptualise the fact that cachexia is a clinical syndrome that accompanies the course of several medical conditions such as cancer, heart failure, diabetes, chronic renal failure and chronic obstructive lung disease, as well as gastrointestinal and infection-related diseases (e.g. HIV infection and sepsis) and ageing. Cachexia is a complex syndrome with many possible scenarios, not just one disease. This is one reason why there is not yet a unified definition of cachexia.

From a pathophysiological standpoint, cachexia can be considered the result of a complex cascade of many different events, such as chronic inflammation and free radical generation, chronic hyperactivation of immune and many different endocrine systems causing dysregulation of appetite, hormone resistance syndromes, catabolism and impaired anabolism. In the past, inflammatory cytokines have received the most attention; today, for instance, the ubiquitin-proteasome system is at the centre of research attention. New treatments based on this research have not yet been proven to be effective, but we are optimistic that the near future will bring many positive developments.

It appears that the high prevalence of cachexia has not yet been matched by a similar rise in awareness of its clinical consequences among healthcare professionals around the world. Weight loss, muscle wasting, inflammation, asthenia and loss of appetite are important signs and symptoms of cachexia. They often go under-recognised in clinical practice. Interestingly, it seems that patients are more concerned than doctors about their nutritional status and related debilitating symptoms, such as fatigue and shortness of breath. Therefore, one of the aims of our book is to increase awareness. Only if cachexia is recognised can research efforts start and available treatments be used to improve the health status of our patients.

The past decade has seen rapid advances in knowledge of every aspect of cachexia, mainly in the pathophysiological mechanisms leading to the syndrome. The next decade – we believe – will bring an even better understanding of the processes leading to muscle and fat tissue wasting. But, particularly, it will bring the first successful therapies. An important aspect in these treatment development efforts will be the cooperation of physicians and scientists across specialties. A successful cachexia treatment in one disease area is also likely to work in another area. This is also a form of translational medicine.

Due to the enormous efforts of scientific societies, individual researchers and patient associations, and with the support of the pharmaceutical industry, a series of congresses, workshops, public conferences and seminars have been organised in the past 6 years,
and the clinical consequences of cachexia are now receiving more attention from health-related professionals, the media, and even political institutions. It is now acknowledged that the cachexia syndrome is an extremely interesting biological phenomenon. Cachexia – in itself – is a relevant clinical event, particularly when considering its implications in terms of increased morbidity and mortality, and it is therefore also an important socio-economic issue.

In summary, cachexia is a complex syndrome/disease, which can be analysed from different perspectives, including, but not limited to, those of morphologists, epidemiologists, biochemists, biologists, physiologists, clinicians (oncologists, surgeons, cardiologists, nephrologists, pulmonologists, nutritionists, immunologists, etc.).

The primary purpose of this reference work is to share the knowledge on cachexia with researchers and scientists in this field. The text is mostly based on observations and studies performed by scientists over the past 15 years. We express our sincere appreciation and thanks to our many colleagues who provided us with unusually fine unpublished manuscripts to be included in this book.

We hope that this book will help facilitate understanding of the complex yet unequivocal clinical role of the cachexia syndrome. Cachexia is a worldwide inter-disciplinary problem. This makes it an exciting and very worthwhile area of research and clinical work.

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## Contents

List of Contributors ............................................................. XIII
Index of Contributors ........................................................... XXI

### 1. ANATOMY, HISTORICAL PERSPECTIVE AND EPIDEMIOLOGY

1.1 Functional Anatomy of the ‘Adipose Organ’
   SAVERIO CINTI ............................................................... 3

1.2 Body Silhouette and Body Fat Distribution
   ANGELA FATA ................................................................. 23

1.3 Historic Views on Cachexia in Humans with Special Reference to Cardiac Cachexia
   WOLFRAM DOEHNER ....................................................... 31

1.4 Epidemiology of Cachexia
   GIOVANNI MANTOVANI, CLELIA MADEDDU ............................ 39

### 2. BIOCHEMISTRY, PHYSIOLOGY AND ‘CLINICS’ OF ADIPOSE TISSUE

2.1 Energy Values of Foods
   GIANNI TOMASSI, NICOLÒ MERENDINO ................................. 47

2.2 Diet-Induced Thermogenesis
   GIANNI TOMASSI, NICOLÒ MERENDINO ................................ 53

### 3. ASSESSMENT OF NUTRITIONAL STATUS

3.1 Biochemical Parameters of Nutrition
   EMINE M. INELMEN, GIUSEPPE SERGI ................................ 59

3.2 Nitrogen Balance and Protein Requirements: Definition and Measurements
   PAOLO TESSARI ............................................................. 73

3.3 Plasma Proteins and Protein Catabolism
   PAOLO TESSARI, RENATO MILLIONI ................................ 81

3.4 Nutritional Status Assessment
   DANIELE SCEVOLA, ANGELA DI MATTEO, OMAR GIGLIO, SILVIA SCEVOLA ................................. 93
### Contents

#### 3.5 Immunological Parameters of Nutrition
CLELIA MADEDDU, GIOVANNI MANTOVANI .................................................. 111

#### 3.6 Functional Parameters of Nutrition
MAX DAHELE, KENNETH C.H. FEARON .................................................. 125

#### 4. THE DIFFERENT FEATURES OF WASTING IN HUMANS

4.1 Anorexia
ALESSANDRO LAVIANO, MICHAEL M. MEGUID, FILIPPO ROSSI FANELLI ................ 139

4.2 Starvation: Social, Voluntary, and Involuntary Causes of Weight Loss
DANIELE SCEVOLA, ANGELA DI MATTEO, OMAR GIGLIO, FILIPPO UBERTI ................ 149

4.3 Cachexia Related to Multiple Causes
GIOVANNI MANTOVANI, CLELIA MADEDDU ............................................. 161

4.4 Non-AIDS Lipodystrophy Syndrome
GIULIANO ENZI, LUCA BUSETTO, GIUSEPPE SERGI, SABRINA PIGOZZO .................. 163

#### 5. PATHOPHYSIOLOGY OF WASTING/CACHEXIA

5.1 Body Composition: Physiology, Pathophysiology and Methods of Evaluation
GIUSEPPE SERGI, PIETRO BONOMETTO, ALESSANDRA COIN, GIULIANO ENZI ............. 175

5.2 Protein Metabolism in Cachexia
MICHAEL J. TISDALE .............................................................................. 185

5.3 Lipid Metabolism in Cachexia
ENZO MANZATO, GIOVANNA ROMANATO ........................................... 191

5.4 Glucose Metabolism
ANTONIO MACCIO, CLELIA MADEDDU, GIOVANNI MANTOVANI ....................... 195

5.5 Cytokines in Cachexia
GIOVANNI MANTOVANI ................................................................... 205

5.6 Cytokines in Chronic Inflammation
WOLFGANG LANGHANS .................................................................. 209

5.7 Biochemistry of the Growth Hormone-Releasing Peptides, Secretagogues and Ghrelin
CYRIL Y. BOWERS, JAW-KANG CHANG, SHAOXING WU, KLAUS D. LINSE,
DAVID L. HURLEY, JOHANNES D. VELDHIUS ........................................... 219

5.8 Ghrelin as a New Factor in the Central Network Controlling Appetite and Food Intake
FABIO BROGLIO, CRISTINA GOTTERO, FLAVIA PRODAM, ELISA ME, SILVIA DESTEFANIS,
FABRIZIO RIGANTI, FEDERICO RAGAZZONI, MARIA ANGELA SEARDO, AART J. VAN DER LELY, EZIO GHIGO ................. 235
<table>
<thead>
<tr>
<th>Section</th>
<th>Authors</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.9 Leptin and Des-acyl Ghrelin: Their Role in Physiological Body Weight Regulation and in Pathological State</td>
<td>Simona Perboni, Giovanni Mantovani, Akio Inui</td>
<td>247</td>
</tr>
<tr>
<td>5.10 Brain Mechanisms in Wasting and Cachexia</td>
<td>Carlos R. Plata-Salamán</td>
<td>259</td>
</tr>
<tr>
<td>5.11 Body Weight Regulation and Hypothalamic Neuropeptides</td>
<td>Flavia Prodam, Elisa Me, Fabrizio Riganti, Maria Angela Sardo, Barbara Lucatello, Mario Maccario, Ezio Ghigo, Fabio Brogli</td>
<td>269</td>
</tr>
<tr>
<td>6. MEDICAL CAUSES OF WASTING/CACHEXIA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.1 Diabetes</td>
<td>Takeshi Ohara</td>
<td>283</td>
</tr>
<tr>
<td>6.2 Endocrine Disorders</td>
<td>Laura Gianotti, Andrea Pici, Fabio Lanfranco, Francesco Tassone, Matteo Baldi, Roberta Giordano, Ezio Ghigo, Mauro Maccario</td>
<td>291</td>
</tr>
<tr>
<td>6.3 Psychiatric Diseases and Depression</td>
<td>Adelio Lucca, Enrico Smeraldi</td>
<td>301</td>
</tr>
<tr>
<td>6.4 Cachexia in Chronic Kidney Disease: Malnutrition-Inflammation Complex and Reverse Epidemiology</td>
<td>Kamyar Kalantar-Zadeh, Joel D. Kopple</td>
<td>305</td>
</tr>
<tr>
<td>6.5 Gastrointestinal Diseases</td>
<td>Hiroyuki Okano</td>
<td>327</td>
</tr>
<tr>
<td>6.6 Chronic Obstructive Lung Disease (COPD) and Treatment of COPD-Related Cachexia</td>
<td>Emiel F.M. Wouters</td>
<td>339</td>
</tr>
<tr>
<td>6.7 Cachexia in Cardiovascular Illness</td>
<td>Sabine Strassburg, Stefan D. Anker</td>
<td>349</td>
</tr>
<tr>
<td>7. CACHEXIA AND AGEING</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.1 Epidemiology of Malnutrition in the Elderly</td>
<td>Shing-Shing Yeh, Michael W. Schuster</td>
<td>365</td>
</tr>
<tr>
<td>7.2 Pathophysiology of Body Composition Changes in Elderly People</td>
<td>Alessandra Coin, Giuseppe Sergi, Emine M. Inelmen, Giuliano Enzi</td>
<td>369</td>
</tr>
<tr>
<td>7.3 The Pharmacokinetics and Pharmacodynamics of Drugs in Elderly Cachectic (Cancer) Patients</td>
<td>Dario Cova, Vito Lorusso, Nicola Silvestris</td>
<td>377</td>
</tr>
</tbody>
</table>
7.4 Pathophysiology of Cachexia in the Elderly
OSAMA QUBAIH, JOHN E. MORLEY .......................................................... 383

7.5 Cytokines and Disability in Older Adults
DAVID R. THOMAS .......................................................... 397

8. CACHEXIA AND HIV Infection/AIDS

8.1 HIV Infection-Related Cachexia and Lipodystrophy
DANIELE SCEVOLA, ANGELA DI MATTEO, OMAR GIGLIO, FILIPPO UBERTI .......................................................... 407

8.2 Treatment of AIDS Anorexia-Cachexia Syndrome and Lipodystrophy
DANIELE SCEVOLA, OMAR GIGLIO, SILVIA SCEVOLA .......................................................... 429

9. CANCER-RELATED CACHEXIA

9.1 Cancer Cachexia and Fat Metabolism
JOSEP M. ARGILÉS, VANESSA ALMENDRO, SILVIA BUSQUETS, FRANCISCO J. LÓPEZ-SORIANO .......................................................... 459

9.2 The Role of Cytokines in Cancer Cachexia
JOSEP M. ARGILÉS, SILVIA BUSQUETS, RODRIGO MOORE-CARRASCO, FRANCISCO J. LÓPEZ-SORIANO .......................................................... 467

9.3 Proinflammatory Cytokines: Their Role in Multifactorial Cancer Cachexia
GIOVANNI MANTOVANI, CLELIA MADEDDU .......................................................... 477

9.4 Proteolysis-Inducing Factor in Cancer Cachexia
MICHAEL J. TISDALE .......................................................... 483

9.5 Lipid Mobilising Factor in Cancer Cachexia
ALESSANDRO LA VIANO, MAURIZIO MUSCARITOLI, FILIPPO ROSSI FANELLI .......................................................... 489

9.6 Dietary Intake, Resting Energy Expenditure, Weight Loss, and Survival in Cancer Patients
KENT LUNDHOLM, INGVAR BOSAEUS .......................................................... 495

9.7 The Ubiquitin/Proteasome System in Cancer Cachexia
MAURIZIO MUSCARITOLI, MAURIZIO BOSSOLA, GIOVANNI B. DOGLIETTO, FILIPPO ROSSI FANELLI .......................................................... 503

9.8 Non-GI-Malignancy-Related Malabsorption Leads to Malnutrition and Weight Loss
SUSUMU SUZUKI, CAROLINA G. GONCALVES, EDUARDO J.B. RAMOS, AKIHIRO ASAKAWA, AKIO INUI, MICHAEL M. MEGUID .......................................................... 509

9.9 Omega-3 Fatty Acids, Cancer Anorexia, and Hypothalamic Gene Expression
EDUARDO J.B. RAMOS, CAROLINA G. GONCALVES, SUSUMU SUZUKI, AKIO INUI, ALESSANDRO LA VIANO, MICHAEL M. MEGUID .......................................................... 521

9.10 The Role of Pineal Hormone Melatonin in Cancer Cachexia
PAOLO LISSONI, LUCA A. FUMAGALLI, FERNANDO BRIVIO, GIANSTEFANO GARDANI, ANGELO NESPOLI .......................................................... 537
### 10. TREATMENT OF CANCER CACHEXIA

<table>
<thead>
<tr>
<th>Section</th>
<th>Author(s)</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.1 The Current Management of Cancer Cachexia</td>
<td>Giovanni Mantovani</td>
<td>563</td>
</tr>
<tr>
<td>10.2 The Role of Artificial Nutrition Support in the Cancer Patient</td>
<td>Federico Bozetti</td>
<td>581</td>
</tr>
<tr>
<td>10.3 The Role of Appetite Stimulants for Cancer-Related Weight Loss</td>
<td>Jamie H. Von Roenn</td>
<td>593</td>
</tr>
<tr>
<td>10.4 Palliative Management of Anorexia/Cachexia and Associated Symptoms</td>
<td>Florian Strasser</td>
<td>599</td>
</tr>
<tr>
<td>10.5 Pharmaco-Nutritional Supports for the Treatment of Cancer Cachexia</td>
<td>Max Dahele, Kenneth C.H. Fearon</td>
<td>603</td>
</tr>
<tr>
<td>10.6 A Critical Assessment of the Outcome Measures and Goals of Intervention in Cancer Cachexia</td>
<td>Kenneth C.H. Fearon, Richard J.E. Skipworth</td>
<td>619</td>
</tr>
<tr>
<td>10.7 Meeting the Amino Acid Requirements for Protein Anabolism in Cancer Cachexia</td>
<td>Vickie E. Baracos</td>
<td>631</td>
</tr>
<tr>
<td>10.8 The role of Branched-Chain Amino Acids and Serotonin Antagonists in the Prevention and Treatment of Cancer Cachexia</td>
<td>Alessandro Laviano, Antonia Cascino, Michael M. Meguid, Isabella Preziosa, Filippo Rossi Fanelli</td>
<td>635</td>
</tr>
<tr>
<td>10.9 An Update on Therapeutics: The Cancer Anorexia/Weight Loss Syndrome in Advanced Cancer Patients</td>
<td>Aminah Jatoi, Karin F. Giordano, Phuong L. Nguyen</td>
<td>643</td>
</tr>
<tr>
<td>10.10 Medroxyprogesterone Acetate in Cancer Cachexia</td>
<td>Giorgio Lelli, Benedetta Urbini, Daniela Scapoli, Germana Gilli</td>
<td>649</td>
</tr>
<tr>
<td>10.11 Progestagens and Corticosteroids in the Management of Cancer Cachexia</td>
<td>Davide Tassinari, Marco Maltoni</td>
<td>653</td>
</tr>
<tr>
<td>10.12 COX-2 Inhibitors in Cancer Cachexia</td>
<td>Giovanni Mantovani</td>
<td>667</td>
</tr>
<tr>
<td>10.13 Anti-TNF-α Antibody and Cancer Cachexia</td>
<td>Mark de Witte, Mark Anderson, Don Robinson</td>
<td>673</td>
</tr>
</tbody>
</table>
10.14 A Phase II Study with Antioxidants, both in the Diet and Supplemented, Pharmaco-nutritional Support, Progestagen and Anti-COX-2 Showing Efficacy and Safety in Patients with Cancer-Related Anorexia-Cachexia and Oxidative Stress
GIOVANNI MANTOVANI, CLELIA MADEDDU, ANTONIO MACCIÒ, GIULIA GRAMIGNANO, MARIA RITA LUSSO, ELENA MASSA, GIORGIO ASTARA, ROBERTO SERPE .................................................. 685

11. TREATMENT OF CACHEXIA IN THE ELDERLY

11.1 Treatment of Weight Loss and Cachexia in the Elderly
SHING-SHING YEH, MICHAEL W. SCHUSTER .................................................. 701

11.2 Treatment of Sarcopenia and Cachexia in the Elderly
CHARLES P. LAMBERT, WILLIAM J. EVANS, DENNIS H. SULLIVAN .......................... 719

11.3 Management of Weight Loss in Older Persons
OSAMA QUBAIAH, JOHN E. MORLEY .......................................................... 731

12. A GLOBAL PERSPECTIVE FOR THE TREATMENT OF CACHEXIA

12.1 Cachexia: Therapeutic Immunomodulation Beyond Cytokine Antagonism
STEPHAN VON HAEHLING, STEFAN D. ANKER ............................................. 741

Subject Index ................................................................. 755
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Index of Contributors

Almendro V. 459
Anderson M. 673
Anker S.D. 349, 741
Argilès J.M. 459, 467
Asakawa A. 509
Astara G. 685
Baldi M. 291
Balducci L. 551
Baracos V.E. 631
Bonometto P. 175
Bosaeus I. 495
Bossola M. 503
Bowers C.Y. 219
Bozetti F. 581
Brivio F. 537
Broglio F. 235, 269
Busetto L. 163
Busquets S. 459, 467
Cascino A. 635
Chang J.-K. 219
Cinti S. 3
Coin A. 175, 369
Cova D. 377
Dahele M. 125, 603
de Witte M. 673
Destefanis S. 235
Di Matteo A. 93, 149, 407
Doehner W. 31
Doglietto G.B. 503
Enzi G. 163, 175, 369
Evans W. J. 719

Faga A. 23
Fearon K.C.H. 125, 603, 619
Fumagalli L.A. 537
Gardani G. 537
Ghigo E. 235, 269, 291
Gianotti L. 291
Giglio O. 93, 149, 407, 429
Gilli G. 649
Giordano K.F. 643
Giordano R. 291
Goncalves C.G. 509, 521
Gottero C. 235
Gramignano G. 685
Hurley D.L. 219
Inelmen E.M. 59, 369
Inui A. 247, 509, 521
Jatoi A. 643
Kalantar-Zadeh K. 305
Kopple J.D. 305
Lambert C.P. 719
Lanfranco F. 291
Langhans W. 209
Laviano A. 139, 489, 521, 635
Lelli G. 649
Linse K.D. 219
Lissoni P. 537
López-Soriano F.J. 459, 467
Lorusso V. 377
Lucatello B. 269
Lucca A. 301
Lundholm K. 495
Index of Contributors

Lusso M.R. 685
Maccario M. 269, 291
Macciò A. 195, 685
Madeddu C. 39, 111, 161, 195, 477, 685
Maltoni M. 653
Mantovani G. 39, 111, 161, 195, 205, 247, 477, 563, 667, 685
Manzato E. 191
Massa E. 685
Me E. 235, 269
Meguid M.M. 139, 509, 521, 635
Merendino N. 47, 53
Millioni R. 81
Moore-Carrasco R. 467
Morley J.E. 383, 731
Muscaritoli M. 489, 503
Nespoli A. 537
Nguyen P.L. 643
Ohara T. 283
Okano H. 327
Perboni S. 247
Picu A. 291
Pigozzo S. 163
Plata-Salaman C.R. 259
Preziosa I. 635
Prodam F. 235, 269
QuBaiah O. 383, 731
Ragazzoni F. 235
Ramos E.J.B. 509, 521
Riganti F. 235, 269
Robinson D. 673
Romanato G. 191
Rossi Fanelli F. 139, 489, 503, 635
Scapoli D. 649
Scevola D. 93, 149, 407, 429
Scevola S. 93, 429
Schuster M.W. 365, 701
Seardo M.A. 235, 269
Sergi G. 59, 163, 175, 369
Serpe R. 685
Silvestris N. 377
Skipworth R.J.E. 619
Smeraldi E. 301
Strassburg S. 349
Strasser F. 547, 599
Sullivan D.H. 719
Suzuki S. 509, 521
Tassinari D. 653
Tassone F. 291
Tessari P. 73, 81
Thomas D.R. 397
Tisdale M.J. 185, 483
Tomassi G. 47, 53
Uberti F. 149, 407
Urbini B. 649
van der Lely A.J. 235
Veldhuis J.D. 219
Von Haehling S. 741
von Roenn J.H. 593
Wouters E.F.M. 339
Wu S. 219
Yeh S.-S. 365, 701