Contents

Contributors xi
Preface xiii

1 Cancer in the twenty-first century 1
Natalie Doyle and Clare Shaw

Introduction 1
What is cancer and what causes it? 1
Development and spread of cancer 2
What is the global burden of cancer? 4
Whom does cancer affect? 5
Historical perspective on cancer treatment 6
Cancer survivorship – living with and beyond cancer 9
Nutrition and cancer 10
References 11

2 Cancer and nutritional status 13
Alessandro Laviano, Isabella Preziosa and Filippo Rossi Fanelli

Introduction 13
Nutritional status and outcome in cancer patients 13
Cancer cachexia 14
Pathogenesis of anorexia and reduced energy intake 16
Pathogenesis of wasting 20
Cancer cachexia: a neurological disease? 23
Summary 24
References 24

3 Treatment of cancer 27
Sanjay Popat

Introduction 27
Treatment intent 27
Treatment setting 28
Treatment modalities 28
Conclusion 43
References 44
## Contents

### 4 Effect of malnutrition on cancer patients 45
*Louise Henry*

- Introduction 45
- Prevalence of malnutrition amongst cancer patients 46
- Effect of malnutrition on outcome 61
- Mortality 68
- Type of cancer 69
- Nutritional status as a prognostic indicator 69
- Morbidity 70
- Quality of life 71
- References 75

### 5 Nutrition screening 83
*Sian Lewis*

- Introduction 83
- Scored Patient-Generated Subjective Global Assessment 85
- Malnutrition Universal Screening Tool 89
- Mini Nutritional Assessment 90
- Nutritional Risk Screening 91
- Malnutrition Screening Tool 91
- Conclusion 93
- Summary 93
- References 94

### 6 Nutritional requirements of patients with cancer 97
*C. Elizabeth Weekes*

- Introduction 97
- Energy 98
- Methods used to estimate energy requirements 100
- Disease-specific requirements 102
- Staging and tumour burden 105
- Treatment 105
- Response to treatment 107
- Tumour recurrence 107
- Inflammatory response and cachexia 107
- Protein 108
- Micronutrients 111
- What should we do in clinical practice? 112
- Summary 114
- References 115
Contents

7 The psychosocial influences of food choices made by cancer patients 121
   Lucy Eldridge
   Introduction 121
   Food and cancer 121
   Influences to food choices 122
   Other dietary approaches patients choose to take and the reasons why 125
   Sourcing information 126
   Summary 127
   References 128

8 Nutritional support for the cancer patient 130
   Clare Shaw and Jane Power
   Introduction 130
   Food provision in a health care setting 130
   Symptom management 136
   Oral nutritional supplements 141
   Artificial nutrition support 142
   Summary 153
   References 154

9 Late effects of cancer treatment in adult patients 158
   Jervoise Andreyev
   Cancer is a chronic disease 158
   What is survivorship? 160
   Who should the dietitian aim to help? 160
   The stocktaking interview at the end of the treatment 161
   The metabolic syndrome 163
   Management of the metabolic syndrome 164
   Malnutrition in the cancer survivor 164
   Summary 170
   References 170

10 Nutrition and palliative care 173
    Clare Shaw
    Introduction 173
    The role of nutrition in palliative care 175
    Psychological aspects of food intake 177
    Nutrition support in palliative care 179
    Management of nutritional problems 180
    Artificial nutrition support in palliative care 182
    Summary 185
    References 185
Contents

Cervical cancer 272
Vulval and vaginal cancers 273
Nutritional issues 273
Nutritional implications of treatment 274
Medical problems 279
Nutrition and survivorship 283
Summary 283
References 283

15 Haemato-oncology 287
Gayle Black
Introduction 287
Disease characteristics and nutritional implications at diagnosis 287
Nutritional implications during induction and intensification treatment 289
Stem cell transplantation (consolidation phase) 289
Nutrition support post-transplantation 299
Long-term implications following transplantation 304
Summary 305
References 305

16 Paediatric oncology 311
Evelyn Ward
Introduction 311
Types of childhood cancers 312
Aetiology of malnutrition in children with cancer 315
Identification of nutritional risk 317
Nutritional support 318
References 329

17 Nutrition and breast cancer 334
Barbara Parry
Introduction 334
The role of diet in breast cancer aetiology and survival 336
Gestational nutrition and subsequent birth weight 336
Breastfeeding 341
Body fatness, body composition and weight management 342
Alcohol 343
Dietary fat 345
Fruits and vegetables (including beans and pulses) 347
Dairy foods 351
Meat and meat products 352
Specific nutrient associations and nutritional supplements 353
Contaminants in foods 353
Physical activity 354
Contents

Benefits of physical activity to breast cancer survivors 355
Nutritional problems during breast cancer treatment 356
Summary 358
References 358

18 Nutritional management in prostate cancer 363
Kathryn Parr

Introduction 363
Dietary factors that may reduce the risk of prostate cancer 364
Factors that may increase risk of prostate cancer 367
Dietary interventions and prostate cancer progression 368
Obesity/weight management 371
Nutritional issues during treatment for prostate cancer 371
Nutrition-related side effects of medications used to treat prostate cancer 372
Malnutrition in prostate cancer 373
Palliative care in prostate cancer 373
Summary 373
References 375

19 Lung cancer 379
Cherry Vickery

Introduction 379
Diet and development of lung cancer 380
Nutritional status at presentation 381
Treatment of non-small cell lung cancer 382
Treatment of small cell lung cancer 383
Treatment of mesothelioma 384
Palliative treatments 384
Symptom management 386
Summary 388
References 388

Index 391