

Preservation of organ function in head and neck cancer

Abstract

Preservation of function is a crucial aspect for the evaluation of therapies applied in the field of head and neck cancer. However, preservation of anatomic structures cannot automatically be equated with preservation of function. Functional outcome becomes increasingly important particularly for the evaluation of alternative treatment options with equivalent oncological outcomes.

As a result, present studies take into account three topic areas with varying emphasis: (1) the effects of cancer therapy on essential physiological functions, (2) additional therapy-induced side-effects and complications, and (3) health-related quality of life.

The present article summarizes vital aspects of clinical research from recent years. Functional outcomes after surgical and non-surgical treatment approaches are presented according to tumor localization and staging criteria. Additional methodological aspects relating to data gathering and documentation as well as challenges in implementing the results in clinical practice are also discussed.

Keywords: head and neck cancer, oral cancer, oropharyngeal cancer, laryngeal cancer, organ preservation, toxicity, quality of life, functional outcome

Introduction

From an oncological perspective, it is particularly important that recurrences and secondary malignancies have to be recognized and treated as early as possible in the course of cancer follow-up among patients with head and neck cancer (HNC). Further goals include the treatment of functional and psychosocial issues, and an efficiency assessment of the therapy that has taken place [1].

Patients with HNC suffer from a variety of problems, e.g. with breathing, eating, speaking, pain, and psychic difficulties, that follow a cancer diagnosis, and individual changes in their day-to-day lives. Examples of this are participating in meals within their usual social setting, conducting personal hygiene, oral communication, and pursuit of their professional and social activities. According to the World Health Organization (WHO), all these aspects are summarized under the term "functioning" [2]. The assessment of functioning after cancer treatment has become a key component of many clinical studies in recent years. The extent of functional problems is considered an independent predictor of patient survival [3], [4], [5], [6].

Beyond that, it would be desirable to make comparative statements on the (expected) functional results of oncologically equivalent therapies to be able to give patients more detailed advice on their therapy decisions.

Another term that is meaningful in this context is "health-related quality of life." It represents a subjective psychological notion that assesses health status from the perspective of the patient affected. It is defined as a multidimensional notion that encompasses physical, mental,

social and behavioral components of well-being and functioning from the viewpoint of the patient [7].

Despite great interest and a correspondingly large number of publications on the topic, it is difficult overall to draw conclusions for clinical care. This is partly due to methodological limitations of the studies (imprecise details on tumor localization and the therapy conducted, small case numbers, few randomized controlled studies, limited longitudinal data, etc.), but also to two content-related challenges. First, the lack of a definition for the criteria of functioning across all health professional groups, and secondly a quite large and non-homogenous group of different instruments with which functioning is measured. Some of these instruments vary so much among each other, that it is hard to design suitable meta-analyses [8], [9], [10].

The goal of this review paper is to summarize the current status of knowledge on the topic of preservation of function in HNC. It will also discuss methodological aspects of data gathering and documentation as well as challenges of implementation in clinical practice.

Diagnostic methods

Many outcome instruments have been developed and validated for different study questions over the past few years. Comparisons of diverse target parameters for measuring functional outcome in clinical studies reveal a large spectrum of patient-, investigator- and/or technology-based outcome instruments [11], [12], [13]. There

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Head And Neck Cancer Organ Preservation Function And Rehabilitation

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Head And Neck Cancer Organ Preservation Function And Rehabilitation:

Head and Neck Cancer K. Thomas Robbins, Thomas Murry, 1998 *Head and Neck Cancer* Louis B. Harrison, Roy B. Sessions, Waun Ki Hong, 2009 This comprehensive multidisciplinary text addresses all aspects of head and neck cancer and represents a wide spectrum of specialists including surgical radiation and medical oncologists dentists pathologists radiologists and nurses The book focuses on a two part approach to treatment that maximizes the chance for a cure while maintaining a strong emphasis on quality of life This Third Edition s updated techniques section includes new radiation techniques such as IMRT and IGRT and new endoscopic and laser surgical techniques Other highlights include a new chapter on reconstructive techniques significant updates to all site specific chapters updates on chemoprevention and molecular targeting and discussions of new imaging modalities such as fused PET CT A companion Website will offer the fully searchable text with all images **Multidisciplinary Care of the Head and Neck Cancer Patient** Ellie Maghami, Allen S. Ho, 2018-02-12 This book identifies key treatment challenges and unique care considerations in patients with head and neck cancers providing a comprehensive guide to patient management that illustrates the critical importance of a multidisciplinary approach in achieving optimal oncological functional and survival outcomes It covers all relevant specialties including dental and oral medicine medical oncology radiation oncology surgical oncology and reconstructive surgery It highlights the vital role played by ancillary head and neck cancer services such as speech and swallowing therapy occupational and physical therapy and nutritional therapy in offering essential physical and psychological support from the time of diagnosis onward The closing chapters address post treatment issues including those relating to survivorship surveillance and end of life care Multidisciplinary care is perhaps even more important for patients with head and neck cancers than for other cancer patients and in addressing all its aspects this book is invaluable for a wide range of practitioners **Principles and Practice of Head and Neck Surgery and Oncology** Paul Q. Montgomery, Peter H. Rhys Evans, Patrick J. Gullane, 2009-07-09 This second edition of an award winning title has been thoroughly updated by a team of world leading head and neck surgeons oncologists and allied healthcare professionals Principles and Practice of Head Neck Surgery and Oncology 2nd edition is a comprehensive evidence based account of the current scientific knowledge about head and neck t *Head and Neck Cancer* K. Thomas Robbins, Thomas Murry, 1998 *Cummings Otolaryngology - Head and Neck Surgery E-Book* Paul W. Flint, Bruce H. Haughey, K. Thomas Robbins, Valerie J. Lund, J. Regan Thomas, John K. Niparko, Mark A. Richardson, Marci M. Lesperance, 2010-03-09 Through four editions Cummings Otolaryngology has been the world s most trusted source for comprehensive guidance on all facets of head and neck surgery This 5th Edition edited by Paul W Flint Bruce H Haughey Valerie J Lund John K Niparko Mark A Richardson K Thomas Robbins and J Regan Thomas equips you to implement all the newest discoveries techniques and technologies that are shaping patient outcomes You ll find new chapters on benign neoplasms endoscopic DCR head and neck ultrasound and trends in surgical technology a new section on rhinology and

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Bernier,2016-08-22 This second edition provides a comprehensive view of consolidated and innovative concepts in terms of both diagnosis and treatment Written by leading international physicians and investigators this book emphasizes the necessity of combining local and systemic treatments to achieve the objective of yielding higher cure rates and lower toxicities Heavily updated from the previous edition it highlights new surgery and radiotherapy techniques disease awareness patient quality of life and comprehensive management Head and neck cancers are a complex clinical entity and their response to treatment is also known to vary markedly in function of host related factors Notwithstanding the impressive progresses observed in the field of imaging head and neck cancers are often diagnosed at a late stage and the presence of locally advanced disease in a significant number of patients implies the use of aggressive treatments in order to both ensure local disease control and reduce distant metastasis risks In comparison with the first edition Head and Neck Cancer Second Edition provides a detailed update of innovative concepts in chemo and bio radiation viral infection impact on tumor growth and response to treatment and impact of tumor and host related factors on treatment outcome **Function Preservation**

in Laryngeal Cancer, An Issue of Otolaryngologic Clinics of North America Babak Sadoughi,2015-08-10 Cancers of the larynx while survival outcomes increase result in massive treatment damage from radiation and surgery Patients often lose ability to speak and to eat Preserving the larynx is a fine balance of cancer eradication life extension and quality of life This issue of Otolaryngologic Clinics led by Dr Babak Sadoughi should be of interest to Otolaryngologists Oncologists Radiologists and Speech Therapists The issue approach reaches all the most important aspects of diagnosing and treating the patient with laryngeal cancer with a focus on preserving the voice in early laryngeal cancer and preserving and restoring function in advanced laryngeal cancer Topics include Functional Anatomy and Oncological Barriers of the Larynx Evaluation of the Dysphonic Patient Role of Advanced Laryngeal Imaging in Glottic Cancer Laryngeal Function after Radiation Therapy Management of Dysphonia after Radiation Therapy Contemporary Surgical Management of Early Glottic Cancer Voice Prognosis after Transoral Laser Microsurgery of the Larynx Voice Rehabilitation after Transoral Laser Microsurgery of the Larynx Quality of Life after Conservation Surgery for Laryngeal Cancer Salvage Conservation Surgery of the Larynx Airway

Preservation in Ablative Laryngeal Surgery Voice Restoration after Total Laryngectomy A special article for Residents written by a Resident emphasizes essential take home messages for laryngeal function preservation diagnosis and treatment *The MIT Encyclopedia of Communication Disorders* Raymond D. Kent, 2004 A major new reference work with entries covering the entire field of communication and speech disorders

DeLisa's Physical Medicine and Rehabilitation: Principles and Practice Walter R. Frontera, Joel A. DeLisa, Bruce M. Gans, Lawrence R. Robinson, 2019-05-30 DeLisa's Physical Medicine and Rehabilitation Principles and Practice presents the most comprehensive review of the state of the art evidence based clinical recommendations for physiatric management of disorders affecting the brain spinal cord nerves bones joints ligaments muscles and tendons

Scott-Brown's Otorhinolaryngology and Head and Neck Surgery, Eighth Edition John Watkinson, Ray Clarke, 2018-07-17 Scott Brown's Otorhinolaryngology is used the world over as the definitive reference for trainee ENT surgeons audiologists and trainee head and neck surgeons as well as specialists who need detailed reliable and authoritative information on all aspects of ear nose and throat disease and treatment Key points accompanied by a fully searchable electronic edition making it more accessible containing the same content as the print edition with operative videos and references linked to Medline highly illustrated in colour throughout to aid understanding updated by an international team of editors and contributors evidence based guidelines will help you in your clinical practice features include key points best clinical practice guidelines details of the search strategies used to prepare the material and suggestions for future research new Endocrine section Scott Brown will provide trainee surgeons ENT and Head and Neck audiologists and ENT physicians with quick access to relevant information about clinical conditions and provide them with a starting point for further research The accompanying electronic edition enhanced with operative videos will enable both easy reference and accessibility on the move

Dysphagia Olle Ekberg, 2012-08-29 This book provides a comprehensive and up to date description of the diagnosis and management of dysphagia with particular reference to oral and pharyngeal dysfunction All aspects of dysphagia are covered from anatomy and physiology to patient care Alongside descriptions of a variety of disease entities signs and symptoms and treatment approaches many other relevant topics are addressed including endoscopic and manometric aspects malnutrition and dehydration the psychiatric burden and features specific to pediatric and geriatric patients The authors are without exception renowned experts in their field This book will be of value to all specialists involved in the evaluation and treatment of dysphagia including ENT surgeons thoracic surgeons speech and language pathologists phoniatricians gastroenterologists neurologists and radiologists

Dysphagia Management in Head and Neck Cancers Krishnakumar Thankappan, Subramania Iyer, Jayakumar R Menon, 2018-10-11 Dysphagia and problems related to swallowing are common following treatment for head and neck cancers Though there are books available on dysphagia management and associated neurological conditions this is the only atlas that comprehensively discusses dysphagia related to the head and neck cancers It comprises of 33 chapters divided into five sections The initial chapters

present the anatomy and physiology of swallowing and the pathophysiology of the dysphagia related structures. It discusses assessment of dysphagia in detail highlighting clinical and instrumental evaluations. Swallowing dysfunction related to common subsite cancers and chemo radiotherapy related dysphagia are explored individually. The book addresses direct and indirect swallowing therapy methods involving postures and exercises in a detailed yet simple manner to enable them to be incorporated in routine practice. It also covers topics like nutritional management, alternative feeding methods and unique problems associated with tracheostomy that have a great bearing on the day to day management of patients with dysphagia. The current status of the research and evidence based management updates are also included. Additionally, where appropriate, videos are included for a better understanding of the subject. Written and edited by experts in the field, the book is intended for clinicians treating head and neck cancer: head and neck surgeons, radiation oncologists, speech and swallowing therapy specialists and trainees in these fields.

Cancer of the Head and Neck Jatin P. Shah, American Cancer Society, 2001

Dr Jatin P Shah has brought together contributing authors in a single volume that represents the head and neck management team at Memorial Sloan Kettering Cancer Center. The strength of the volume is in its internal consistency of diagnostic approaches, therapeutic decisions, multidisciplinary treatment programs and surgical techniques. An effort has also been made to be comprehensive and to give a balanced view to other treatment approaches. Essential to the diagnosis and treatment of the disease is the involvement of a multidisciplinary management team of medical experts. Such disease management teams develop treatment algorithms and establish treatment guidelines to unify an approach to maintain internal consistency, initiate investigative protocols and push the frontiers in the battle against cancer.

Oral, Head and Neck Oncology and Reconstructive Surgery - E-Book R. Bryan Bell, Peter A. Andersen, Rui P. Fernandes, 2017-08-25

Oral Head and Neck Oncology and Reconstructive Surgery is the first multidisciplinary text to provide readers with a system for managing adult head and neck cancers based upon stage. Using an evidence based approach to the management and treatment of a wide variety of clinical conditions, the extensive experience of the author and contributors in head and neck surgery and oncology are highlighted throughout the text. This includes computer aided surgical simulation, intraoperative navigation, robotic surgery, endoscopic surgery, microvascular reconstructive surgery, molecular science and tumor immunology. In addition, high quality photos and illustrations are included which are easily accessible on mobile devices. Management protocols and outcomes assessment provide clear guidelines for managing problems related to adult head and neck oncology and reconstructive surgery. State of the art guidance by recognized experts details current techniques as well as technological advances in head and neck, cranio maxillofacial surgery and oncology. Evidence based content details the latest diagnostic and therapeutic options for treating a wide variety of clinical problems with an emphasis on surgical technique and outcomes. Multidisciplinary approach reflects best practices in managing head and neck oncology and cranio maxillofacial surgery. 900 highly detailed images clearly demonstrate pathologies and procedures. Designed for the modern classroom which lets you

access important information anywhere through mobile tablets and smart phones *Physical Medicine and Rehabilitation E-Book* Randall L. Braddom, 2010-12-07 Physical Medicine and Rehabilitation presents today's best physiatry knowledge and techniques ideal for the whole rehabilitation team This trusted reference delivers the proven science and comprehensive guidance you need to offer every patient maximum pain relief and optimal return to function In this new edition Dr Randall L Braddom covers current developments in interventional injection procedures the management of chronic pain integrative medicine recent changes in the focus of stroke and brain injury rehabilitation and much more Access the complete contents online along with 1000 self assessment questions at www.expertconsult.com Gain a clear visual understanding of important concepts thanks to 1400 detailed illustrations 1000 in full color Find and apply the information you need easily with each chapter carefully edited by Dr Braddom and his associates for consistency succinctness and readability Access the fully searchable text online at Expert Consult as well as 1000 self assessment questions Master axial and peripheral joint injections through in depth coverage of the indications for and limitations of these therapies Make optimal use of ultrasound in diagnosis and treatment Get a broader perspective on your field from a new chapter on PM R in the international community **Cummings Otolaryngology E-Book** Paul W. Flint, Bruce H. Haughey, Valerie J. Lund, K. Thomas Robbins, J. Regan Thomas, Marci M. Lesperance, Howard W. Francis, 2020-04-22 The most comprehensive multi disciplinary text in the field Cummings Otolaryngology Head and Neck Surgery 7th Edition provides detailed practical answers and easily accessible clinical content on the complex issues that arise for otolaryngologists at all levels across all subspecialties This award winning text is a one stop reference for all stages of your career from residency and board certification through the challenges faced in daily clinical practice Updated content new otology editor Dr Howard W Francis and new chapters and videos ensure that this 7th Edition remains the definitive reference in today's otolaryngology Brings you up to date with the latest minimally invasive procedures recent changes in rhinology and new techniques and technologies that are shaping patient outcomes Contains 12 new chapters including Chronic Rhinosinusitis Facial Pain Geriatric Otology Middle Ear Endoscopic Surgery Pediatric Speech Disorders Pediatric Cochlear Implantation Tongue Ties and Lip Ties Laryngotracheal Clefts and more Covers recent advances and new approaches such as the Draf III procedure for CRS affecting the frontal recess endoscopic vidian and posterior nasal neurectomy for non allergic rhinitis and endoscopic approaches for sinonasal and orbital tumors both extra and intraconal Provides access to 70 key indicator Accreditation Council for Graduate Medical Education Key Indicator Procedures and surgical videos an increase of 43% over the previous edition Offers outstanding visual support with 4 000 high quality images and hundreds of quick reference tables and boxes Enhanced eBook version included with purchase Your enhanced eBook allows you to access all of the text figures and references from the book on a variety of devices **Essentials of Head and Neck Cancer** Alberto Staffieri, 2011-10-29 In recent times there has been a tremendous increase in our knowledge and understanding of the molecular mechanisms genetic and epigenetic interactions

and epidemiological and aetiopathogenic factors involved in the development progression and metastatic spread of head and neck cancers HNCs Improvements in diagnostics and imaging techniques advancements in various treatment modalities and incorporation of quality of life and functional outcomes in HNCs have also significantly influenced the management and outcomes of the disease This book brings together a broad comprehensive and balanced view of current approaches to the multidisciplinary management and underlying biology of HNCs It covers a wide range of exciting new findings in both the clinical and the basic sciences relevant to HNC International experts in surgical medical and radiation oncology and the basic sciences have contributed authoritative overviews of the current status and new frontiers in the management of HNCs The multidisciplinary scope of this book provides the necessary grounding for residents otolaryngologists and head and neck surgeons medical and radiation oncologists and allied specialists involved in the management of HNCs *Comprehensive Management of Head and Neck Cancer* Narayana Subramaniam,Sivakumar Vidhyadharan,Samskruthi P Murthy,2021-02-22 This book is a complete guide to the management of head and neck cancer Divided into five sections the text begins with discussion on pre treatment assessment and evaluation Section two covers management of numerous different head and neck cancers from oral and larynx to temporal bone saliva gland thyroid and many more A complete chapter is dedicated to robotic surgery The following sections detail management of tumour like lesions reconstructive surgery and post treatment care and rehabilitation Authored by recognised experts in the field the comprehensive text is further enhanced by clinical images and figures Key points Comprehensive guide to management of head and neck cancer Complete chapter dedicated to robotic surgery Discusses reconstructive surgery and post treatment care Includes images and figures to enhance text
 Maintenance Manual for Lifelong Learning Jonas T. Johnson,2002-05

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