Contents

1. Epidemiology 1

The role of alcohol and tobacco in multiple primary cancers of the upper digestive system, larynx and lung: A prospective study *1*
David Schottenfeld, Rebecca C Gantt, Ernest L Wynder

Commentary: *Luiz P Kowalski 1*

Incidence rates of oral cancer and natural history of oral precancerous lesions in a 10-year follow-up study of Indian villagers *5*
Prakash C Gupta, Fali S Mehta, Dinesh K Daftary, et al.

Commentary: *Jay Boyle 5*

The causes of cancer: Quantitative estimates of avoidable risks of cancer in the United States today *7*
Richard Doll, Richard Peto

Commentary: *Amy Y Chen 7*

Alcohol drinking in never users of tobacco, cigarette smoking in never drinkers, and the risk of head and neck cancer: Pooled analysis in the international head and neck cancer epidemiology consortium *10*
Mia Hashibe, Paul Brennan, Simone Benhamou, et al.

Commentary: *Pankaj Chaturvedi, Atul Budukh 10*

2. Pathology, Molecular Biology and Genetics 13

Thickness, cross-sectional areas and depth of invasion in the prognosis of cutaneous melanoma *13*
Alexander Breslow

Commentary: *John A "Drew" Ridge 13*

Occurrence of *p53* gene deletions and human papilloma virus infection in human head and neck cancer *16*
David G Brachman, Deborah Graves, Everett Vokes, et al.

Commentary: *Wayne Koch 16*

Molecular assessment of histopathological staging in squamous-cell carcinoma of the head and neck *20*
Joseph A Brennan, Li Mao, Ralph H Hruban, et al.

Commentary: *James W Rocco 20*

Frequent microsatellite alterations at chromosomes 9p21 and 3p14 in oral premalignant lesions and their value in cancer risk assessment *24*
Li Mao, Jin S Lee, You H Fan, et al.

Commentary: *Jeffrey N Myers, Marcus M Monroe 24*

Genetic progression model for head and neck cancer: implications for field cancerization *26*
Joseph Califano, Peter van der Riet, William Westra, et al.

Commentary: *Bhuvanesh Singh 26*

Levels of TGF-α and EGFR protein in head and neck squamous cell carcinoma and patient survival *29*
Jennifer Rubin Grandis, Mona F Melhem, William E Gooding, et al.

Commentary: *K Kian Ang 29*

Mutations in SDHD, a mitochondrial complex II gene, in hereditary paraganglioma *32*
Bora E Baysal, Robert E Ferrell, Joan E Willett-Brozick, et al.

Commentary: *David Myssiorek 32*

The mutational landscape of head and neck squamous cell carcinoma *35*
Nicolas Stransky, Ann Marie Egloff, Aaron D Tward, et al.

Commentary: *Joseph Califano 35*

Exome sequencing of head and neck squamous cell carcinoma reveals inactivating mutations in *NOTCH1* *38*
Nishant Agrawal, Mitchell J Frederick, Curtis R Pickering, et al.

Commentary: *Thomas E Carey 38*

3. Staging 41

Inclusion of comorbidity in a staging system for head and neck cancer *41*
Jay F Piccirillo

Commentary: *William M Lydiatt 41*

A comparison of published head and neck stage groupings in carcinomas of the oral cavity *44*
Patti A Groome, Karleen Schulze, Morten Boysen, et al.

Commentary: *Carol R Bradford 44*

4. Scalp and Skin 46

Chemosurgical treatment of cancer of the skin
A microscopically controlled method of excision *46*
Frederic E Mohs

Commentary: *Philip L Bailin, Allison T Vidimos 46*

Perineural invasion in squamous cell skin carcinoma of the head and neck *50*
Helmuth Goepfert, William J Dichtel, Jesus E Medina, et al.

Commentary: *Richard J Wong 50*

Prognostic factors for local recurrence, metastasis, and survival rates and squamous cell carcinoma of the skin, ear, and lip
Implications for treatment modality selection *52*
Dan E Rowe, Raymond J Carroll, Calvin L Day, et al.

Commentary: *Randal S Weber 52*

Implications for clinical staging of metastatic cutaneous squamous carcinoma of the head and neck based on a multicenter study of treatment outcomes *56*
Jennifer L Andruchow, Michael J Veness, Gary J Morgan, et al.

Commentary: *Fernando L Dias 56*

Patterns of lymph node spread of cutaneous squamous cell carcinoma of the head and neck *60*
Tom J Vauterin, Michael J Veness, Garry J Morgan, et al.

Commentary: *Ashok R Shaha 60*

5. Sinuses, Orbit and Skull Base 64

Orbital tumors results following the transcranial operative attack by *Walter E Dandy*, Oskar piest, New York, 1941. Pp. xv + 168 *64*

Commentary: *Steven A Newman 64*

A combined intracranial facial approach to the paranasal sinuses 67
Alfred S Ketcham, Robert H Wilkins, John M Van Buren, et al.

Commentary: *Jatin P Shah 67*

Combined surgery, radiotherapy, and regional chemotherapy in carcinoma of the paranasal sinuses *69*
Yasuo Sato, Mamoru Morita, Hiro-omi Takahashi, et al.

Commentary: *Paul P Knegt 69*

Temporal bone resection
Review of 100 cases *72*
John S Lewis

Commentary: *Michael Gleeson 72*

Nonocular cancer in retinoblastoma survivors *76*
David H Abramson, Robert M Ellsworth, Lorenz E Zimmerman

Commentary: *Brian P Marr 76*

The infratemporal fossa approach for the lateral skull base *78*
Ugo Fisch, Paul Fagan, Anton Valavanis

Commentary: *Chandranath Sen, Donato Pacione 78*

Preservation of the eye in paranasal sinus cancer surgery *81*
Christopher Perry, Paul A Levine, Brian R Williamson, et al.

Commentary: *Peter E Andersen 81*

Orbital preservation in maxillectomy *84*
Scott J Stern, Helmuth Goepfert, Gary Clayman, et al.

Commentary: *Dennis H Kraus 84*

Craniofacial surgery for malignant skull base tumors
Report of an international collborative study *87*
Snehal G Patel, Bhuvanesh Singh, Ashok Polluri, et al.

Commentary: *Dan M Fliss, Ziv Gil 87*

Endoscopic resection of sinonasal cancers with and without craniotomy
Oncologic Results *90*
Ehab Hanna, Franco DeMonte, Samer Ibrahim, et al.

Commentary: *Carl H Snyderman 91*

6. Oral Cavity 93

"Field cancerization" in oral stratified squamous epithelium
Clinical implications of multicentric origin *93*
Danely P Slaughter, Harry W Southwick, Walter Smejkal

Commentary: *Diane Carlson, Isaäc van der Waal 93*

Radical surgery in cancer of the head and neck
The changing trends in treatment *97*
Hayes E Martin

Commentary: *Elliot W Strong 97*

Routes of entry of squamous cell carcinoma to the mandible *99*
Alan D McGregor, D Gordon MacDonald

Commentary: *Guillermo Raspall 99*

7. Nasopharynx 102

Stage classification of nasopharyngeal carcinoma: A review *102*
John HC Ho

Commentary: *Bhadrasain Vikram 102*

Retrospective analysis of 5037 patients with nasopharyngeal carcinoma treated during 1976–1985: overall survival and patterns of failure *105*
Anne W Lee, Poon YF, William Foo, et al.

Commentary: *Ivan Tham, Shie-Lee Cheah, Yoke-Lim Soong, Joseph Wee*

Chemoradiotherapy versus radiotherapy in patients with advanced nasopharyngeal cancer:
Phase III randomized intergroup study 0099 *107*
Muhyi Al-Sarraf, Michael LeBlanc, Shanker Giri PG, et al.

Commentary: *Anne WM Lee 107*

Quantification of plasma epstein—barr virus DNA in patients with advanced nasopharyngeal carcinoma *111*
Jin-Ching Lin, Wen-Yi Wang, Kuang Y Chen, et al.

Commentary: *Nancy Y Lee 111*

Randomized trial of radiotherapy versus concurrent chemoradiotherapy followed by adjuvant chemotherapy in patients with American Joint Committee on cancer/international union against cancer Stage III and IV nasopharyngeal cancer of the endemic variety 114
Joseph Wee, Eng Huat Tan, Bee Choo Tai, et al.

Commentary: *Vincent Gregoire 114*

Surgical salvage of persistent or recurrent nasopharyngeal carcinoma with maxillary swing approach—critical appraisal after 2 decades *118*
William I Wei, Jimmy Yu Wai Chan, Raymond Wai-Man Ng, et al.

Commentary: *Willard E Fee, Jr 118*

8. Oropharynx 120

Randomized trial of radiation therapy versus concomitant chemotherapy and radiation therapy for advanced-stage oropharynx carcinoma *120*
Gilles Calais, Mare Alfonsi, Etienne Bardet, et al.

Commentary: *Jonas T Johnson 120*

Evidence for a causal association between human papillomavirus and a subset of head and neck cancers *123*
Maura L Gillison, Wayne M Koch, Randolph B Capone, et al.

Commentary: *Jan Klozar 123*

Transoral robotic surgery for advanced oropharyngeal carcinoma 127
Gregory S Weinstein, Bert W O'Malley, Marc A Cohen, et al.

Commentary: *Eric J Moore 127*

Human papillomavirus and survival of patients with oropharyngeal cancer *131*
K Kian Ang, Jonathan Harris, Richard Wheeler, et al.

Commentary: *Robert L Ferris 131*

9. Hypopharynx and Esophagus 135

The surgical treatment of carcinoma of the hypopharynx and the esophagus *135*
Harold Wookey

Commentary: *Patrick J Bradley 135*

Pharyngogastric anastomosis after esophago-pharyngectomy for carcinoma of the hypopharynx and cervical esophagus *140*
Guan B Ong, Thomas C Lee

Commentary: *Manjit S Bains 140*

Larynx preservation in pyriform sinus cancer: Preliminary results of a european organization for research and treatment of cancer phase III trial *143*
Jean-Louis LeFebvre, Dominique Chevalier, Bernard Luboinski, et al.

Commentary: *Arlene A Forastiere 144*

10. Larynx 148

Conservative surgery of cancer of the larynx *148*
Justo M Alonso

Commentary: *Harvey M Tucker 148*

An endoscopic technique for restoration of voice after laryngectomy *150*
Mark I Singer, Eric D Blom

Commentary: *Frans JM Hilgers 150*

Induction chemotherapy plus radiation compared with surgery plus radiation in patients with advanced laryngeal cancer

The department of veterans affairs laryngeal cancer study group *154*

Commentary: *Jean-Louis LeFebvre 154*

Concurrent chemotherapy and radiotherapy for organ preservation in advanced laryngeal cancer *157*
Arlene A Forastiere, Helmuth Goepfert, Moshe Maor, et al.

Commentary: *Jatin P Shah*

11. Neck 160

Excision of cancer of the head and neck with special reference to the plan of dissection based on one hundred and thirty-two operations *160*
George W Crile

Commentary: *Donald P Shedd 160*

Biopsy by needle puncture and aspiration *162*
Hayes E Martin, Edward B Ellis

Commentary: *Carl E Silver 162*

El Problema de las Metastasis linfáticas Y alejadas del cáncer de laringe e hipofaringe
(The problem of lymphatic and distant metastases in cancer of larynx and hypopharynx) *166*
Osvaldo Suarez

Commentary: *Jesus E Medina 166*

The extracapsular spread of tumors in cervical node metastasis *169*
Jonas T Johnson, E Leon Barnes, Eugene N Myers, et al.

Commentary: *Michiel WM van den Brekel 169*

Functional neck dissection: An evaluation and review of 843 cases *172*
Oreste Pignataro, Ettore Bocca, Cesare Oldini, et al.

Commentary: *Javier Gavilán 172*

Rationale for elective modified neck dissection *175*
Robert M Byers, Patricia F Wolf, Alando J Ballantyne

Commentary: *C René Leemans 175*

Patterns of cervical lymph node metastasis from squamous carcinomas of the upper aerodigestive tract *178*
Jatin P Shah

Commentary: *Eugene N Myers 178*

End results of a prospective trial on elective lateral neck dissection vs type III modified radical neck dissection in the management of supraglottic and transglottic carcinomas *183*
Ricardo R Brentani, Luiz P Kowalski, Jose F Soares, et al.

Commentary: *Ashok R Shaha 183*

Imaging-based nodal classification for evaluation of neck metastatic adenopathy *187*
Peter M Som, Hugh D Curtin, Anthony A Mancuso

Commentary: *Lawrence E Ginsberg 187*

12. Thyroid and Parathyroid 190

The operative story of goiter
The author's operation *190*
William S Halsted

Commentary: *Gregory W Randolph 190*

Relationship of the age of the patient to the natural history and prognosis of carcinoma of the thyroid *193*
George Crile Jr., John B Hazard

Commentary: *Ashok R Shaha 193*

Papillary thyroid carcinoma: A 10-year follow-up report of the impact of therapy in 576 patients *196*
Ernest L Mazzaferri, Robert L Young

Commentary: *Ashok R Shaha 196*

Operative monitoring of parathyroid gland hyperfunction *200*
George L Irvin III, Victor D Dembrow, David L Prudhomme

Commentary: *Martha A Zeiger 200*

Medullary carcinoma of the thyroid:
Current diagnosis and management *203*
Terry C Lairmore, Samuel A Wells

Commentary: *Herbert Chen, Sara E Murray 203*

Thyroid cancer after chernobyl *206*
Vasili S Kazakov, Evgeni P Demidchik, Larisa N Astakhova

Commentary: *Daniel Branovan 206*

Lobectomy versus total thyroidectomy for differentiated carcinoma of the thyroid: A matched-pair analysis *210*
Jatin P Shah, Thom R Loree, Digpal Dharker, et al.

Commentary: *Claudio R Cernea, Lenine G Brandão 210*

Patterns of failure in differentiated carcinoma of the thyroid based on risk groups *213*
Ashok R Shaha, Jatin P Shah, Thom R Loree

Commentary: *Christopher McHenry 213*

Second primary malignancies in thyroid cancer patients *215*
Carole Rubino, Florent de Vathaire, Massimo E Dottorini, et al.

Commentary: *Jeremy L Freeman 215*

An observational trial for papillary thyroid microcarcinoma in japanese patients *217*
Yasuhiro Ito, Akira Miyauchi, Hiroyuki Inoue, et al.

Commentary: *R Michael Tuttle, Ashok R Shaha 217*

13. Salivary Glands 221

Salivary gland tumors in the parotid gland, submandibular gland, and the palate region *221*
Carl-Magnus Eneroth

Commentary: *Vincent van der Poorten 221*

Salivary neoplasms: Overview of a 35-year experience with 2,807 patients *226*
Ronald H Spiro

Commentary: *David W Eisele 226*

Malignant tumors of major salivary gland origin
A matched-pair analysis of the role of combined surgery and postoperative radiotherapy *228*
John G Armstrong, Louis B Harrison, Ronald H Spiro, et al.

Commentary: *Jatin P Shah 228*

14. Soft Tissue Tumors 230

Head and neck soft tissue sarcomas:
A multivariate analysis of outcomes *230*
Brandon G Bentz, Bhuvanesh Singh, James Woodruff, et al.

Commentary: *Murray F Brennan*

15. Neurogenic Tumors and Paragangliomas 232

Carotid body tumor (Chemodectoma)
Clinicopathologic analysis of ninety cases *232*
William R Shamblin, William H ReMine, Sheldon G Sheps, et al.

Commentary: *Kerry D Olsen 232*

Trends in neurovascular complications of surgical management for carotid body and cervical paragangliomas: A fifty-year experience with 153 tumors *235*
John W Hallett, John D Nora, Larry H Hollier, et al.

Commentary: *John P Leonetti 235*

Tumors and surgery of the parapharyngeal space *237*
Kerry Olsen

Commentary: *Patrick J Gullane 237*

Normal life expectancy for paraganglioma patients:
A 50-year-old cohort revisited *239*
Jeanette de Flines, Jeroen Jansen, Reinier Elders, et al.

Commentary: *Ian Ganly 239*

16. Reconstructive Surgery 241

A two-stage method for pharyngoesophageal reconstruction with a primary pectoral skin flap *241*
Vahram Y Bakamjian

Commentary: *Stephan Ariyan 241*

Superiority of the deep circumflex iliac vessels as the supply for free groin flaps
Experimental work *244*
G Ian Taylor, Paul Townsend, Russell Corlett

Commentary: *Mark L Urken 244*

The pectoralis major myocutaneous flap
A versatile flap for reconstruction in the head and neck *248*
Stephan Ariyan

Commentary: *Neal Futran 248*

The radial forearm flap:
A versatile method for intra-oral reconstruction *251*
David S Soutar, Luis R Scheker, Norman SB Tanner, et al.

Commentary: *Ralph Gilbert 251*

Fibula free flap: A new method of mandible reconstruction 253
David A Hidalgo

Commentary: *Joseph J Disa 253*

A classification system and algorithm for reconstruction of maxillectomy and midfacial defects *256*
Peter G Cordeiro, Eric Santamaria

Commentary: *Mark K Wax 256*

Have we found an ideal soft-tissue flap?
An experience with 672 anterolateral thigh flaps *259*
Fu-chan Wei, Vivek Jain, Naci Celik, et al.

Commentary: *Peter G Cordeiro 259*

17. Radiation Oncology 262

The place of radiotherapy in the management of the squamous cell carcinoma of the supraglottic larynx *262*
Gilbert H Fletcher, Richard H Jesse, Robert D Lindberg, et al.

Commentary: *Jacques Bernier 262*

A radiation therapy oncology group (RTOG) phase III randomized study to compare hyperfractionation and two variants of accelerated fractionation to standard fractionation radiotherapy for head and neck squamous cell carcinomas:
First report of RTOG 9003 *266*
Karen K Fu, Thomas F Pajak, Andy Trotti, et al.

Commentary: *Louis B Harrison 266*

Randomized trial addressing risk features and time factors of surgery plus radiotherapy in advanced head and neck cancer *269*
K Kian Ang, Andy Trotti, Barry W Brown, et al.

Commentary: *June Corry 269*

Intensity-modulated radiotherapy in the treatment of nasopharyngeal carcinoma: An update of the UCSF experience *273*
Nancy Y Lee, Ping Xia, Jeanne M Quivey, et al.

Commentary: *Brian O'Sullivan 274*

Hyperfractionated or accelerated radiotherapy in head and neck cancer: A meta-analysis *277*
Jean Bourhis, Jens Overgaard, Hélène Audry, et al.

Commentary: *David M Brizel 277*

18. Medical Oncology 281

The use of the nitrogen mustards in the palliative treatment of carcinoma
With particular reference to bronchogenic carcinoma *281*
David A Karnofsky, Walter H Abelmann, Lloyd F Craver, et al.

Commentary: *Matthew G Fury 281*

A Phase III randomized study comparing cisplatin and fluorouracil as single agents and in combination for advanced squamous cell carcinoma of the head and neck *284*
Charlotte Jacobs, Gary Lyman, Enrique Velez-Garcia, et al.

Commentary: *Merril S Kies 284*

Chemotherapy added to locoregional treatment for head and neck squamous-cell carcinoma: Three meta-analyses of updated individual data *286*
Pignon JP, Bourhis J, Domenge C, et al.

Commentary: *Jennifer Grandis 286*

Phase III randomized trial of cisplatin plus placebo compared with cisplatin plus cetuximab in metastatic/recurrent head and neck cancer: An eastern co-operative oncology group study *289*
Barbara Burtness, Meredith A Goldwasser, William Flood, et al.

Commentary: *Marshall R Posner 289*

Radiotherapy plus cetuximab for squamous-cell carcinoma of the head and neck *292*
James A Bonner, Paul M Harari, Jordi Giralt, et al.

Commentary: *Jatin P Shah 292*

Cisplatin and fluorouracil alone or with docetaxel in head and neck cancer *294*
Marshall R Posner, Diane M Hershock, Cesar R Blajman, et al.

Commentary: *Matthew G Fury 294*

Platinum-based chemotherapy plus cetuximab in head and neck cancer *297*
Jan B Vermorken, Ricard Mesia, Fernando Rivera, et al.

Commentary: *David G Pfister 297*

Improved survival of patients with human papillomavirus-positive head and neck squamous cell carcinoma in a prospective clinical trial *300*
Carole Fakhry, William H Westra, Sigui Li, et al.

Commentary: *Erich M Sturgis 300*

Factors associated with severe late toxicity after concurrent chemoradiation for locally advanced head and neck cancer: An RTOG analysis *304*
Mitchell Machtay, Jennifer Moughan, Andrew Trotti, et al.

Commentary: *Paul M Harari 304*

19. Quality of Life 307

Quality of life in patients with head and neck cancer
Lessons learned from 549 prospectively evaluated patients *307*
Ernest A Weymuller, Bevan Yueh, Frederic WB Deleyiannis, et al.

Commentary: *Randall P Morton 307*

Studies in the quality of life of head and neck cancer patients: Results of a two-year longitudinal study and a comparative cross-sectional cross-cultural survey *310*
Randall P Morton

Commentary: *Ernest A Weymuller 310*