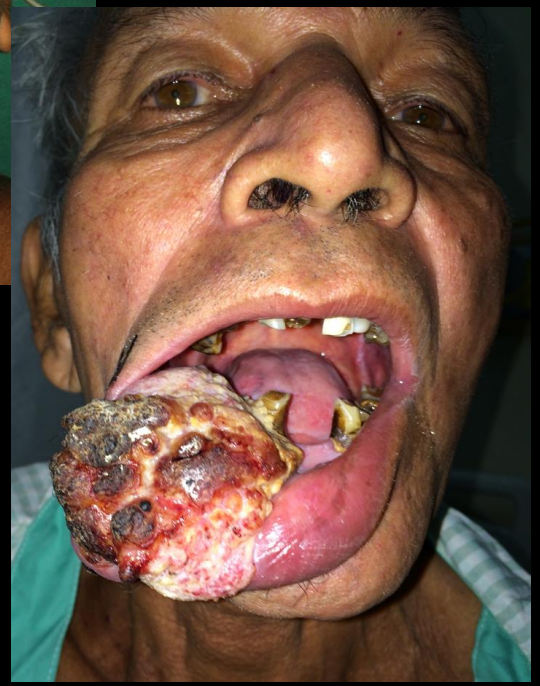
SALVAGE SURGERY FOR RECURRENT SCC- HEAD & NECK (SYSTEMATIC REVIEW& META-ANALYSIS)

DR TAPASWINI PRADHAN
Senior Consultant, Surgical Oncology
Head & Neck Cancer Surgery
INDRAPRASTHA APOLLO HOSPITAL, New Delhi.

Recurrent cancers of oral cavity



Recurrent Cancers

- Features :

1. More infiltrative
2. Multifocal
3. Throws microscopic deposits (outside the treated field)
4. Extensive perineural invasion

Recurrent Cancers (Issues)

Extensive fibrosis & altered anatomy

FROZEN SECTION analysis : difficult

Challenges

- 1. Salvage surgery ： permanent loss of function
- 2. Visible deformity
- 3. High economic cost
- 4. Even death

COUNSELLING

- Provide realistic expectations of the treatment outcomes .
- Complications and side effects : should be clearly defined .
- Functional outcomes : clearly identified

FACTS

- 1. 25- 48% : advanced cancers : treated non- surgically ----- FAIL .
- 2. Recurrence usually occur within the first two years .
- 3. Benefits of cure : DO NOT justify excess morbidity with poor quality of life .
- 4. Long DFI : salvage surgery vs CCRT : SURGERY - better results

Recurrences <> TREATMENT

- Trade off between :

- TREATMENT MORBIDITY

Potential to cure

SALVAGE SURGERY FOR RECURRENT SCC-HEAD & NECK

- Data on clinical outcome : Scarce

  5- yr OS : 6 – 70% *

- Wide range of studies : Majorly - small retrospective studies

  Heterogeneity : pt. characteristics

  pri. Treatment for initial tumour

  type of salvage resection

  with / without re-radiation

*Elbers JBW et al. Eur Arch Otorhinolaryngol.2019;276(3):647-655

The Laryngoscope
Lippincott Williams & Wilkins, Inc., Philadelphia

Salvage Surgery for Patients With Recurrent Squamous Cell Carcinoma of the Upper Aerodigestive Tract: When Do the Ends Justify the Means?

W. Jarrard Goodwin, Jr., MD

META-ANALYSIS

1633 Patients

32 Different Institutions

1980 - 1998

STUDY DESIGN

Meta-analysis of published literature (32 reports)

Prospective Observational Study (109 patients).

Overall Survival

Disease – free survival

Surgical complications

Operative mortality

The Laryngoscope
Lippincott Williams & Wilkins, Inc., Philadelphia

Salvage Surgery for Patients With Recurrent Squamous Cell Carcinoma of the Upper Aerodigestive Tract: When Do the Ends Justify the Means?

W. Jarrard Goodwin, Jr., MD

1080 pts. (meta-analysis)

5 - yr OS : 39.4%

META-ANALYSIS
1633 Patients
32 Different Institutions
1980 - 1998

CONCLUSION
Expected efficacy for salvage surgery in patients with recurrent head & neck cancer was surprisingly good.

TABLE II.
Weighted Averages of Survival End-Points From Publications in the Meta-analysis.

	3-Year Survival		5-Year Survival		2-Year Disease Free	
	Patients	%	Patients	%	Patients	%
Overall	319	37	1080	39	499	51
Early larynx	N/A	N/A	68	83	156	84
All larynx	56	53	293	48	203	76
Oral cavity	N/A	N/A	116	43	239	36
Pharynx	263	34	266	26	57	25

The Laryngoscope
Lippincott Williams & Wilkins, Inc., Philadelphia

Salvage Surgery for Patients With Recurrent Squamous Cell Carcinoma of the Upper Aerodigestive Tract: When Do the Ends Justify the Means?

W. Jarrard Goodwin, Jr., MD

META-ANALYSIS
1633 Patients
32 Different Institutions
1980 - 1998

CONCLUSION
Expected efficacy for salvage surgery in patients with recurrent head & neck cancer was surprisingly good.

Two-Year Disease-Free Survival After Salvage Surgery.

Prospective Observational Study				Meta-Analysis
Stage (P = .0005)		Site (P = .0645)		Site
I	73%	Pharynx	28%*	24%
II	67%*	Oral cavity	47%*	36%
III	33%*	Larynx	58%	76%
IV	22%	Neck	25%	N/A
Total	44%		44%	51%

*Maximum percent, since follow-up does not cover 2 full years for some patients.

The Laryngoscope
Lippincott Williams & Wilkins, Inc., Philadelphia

Salvage Surgery for Patients With Recurrent Squamous Cell Carcinoma of the Upper Aerodigestive Tract: When Do the Ends Justify the Means?

W. Jarrard Goodwin, Jr., MD

META-ANALYSIS
1633 Patients
32 Different Institutions
1980 - 1998

Study Design :
Meta-analysis of published literature (32 reports)

Prospective observational study (109 pt.s)

Surgical complications : Total complications : 7 studies : 39% (10 – 88%)

Major complications : 8 studies : 27% (5 – 48%)

Operative mortality : 18 studies : 718 patients --------- Av. 5.2% (0 – 18%)

Complications (10-88%) *Goodwin W jr. *Laryngoscope*2000; 110:1

MAJOR (5 – 48%)

- Large salivary fistula
- Partial / Total flap necrosis
- Pneumonia
- Carotid rupture
- Cerebrovascular accident

MINOR

- Wound infection
- Small salivary fistula
- Wound dehiscence
- Minor flap necrosis

The Laryngoscope
Lippincott Williams & Wilkins, Inc., Philadelphia

Salvage Surgery for Patients With Recurrent Squamous Cell Carcinoma of the Upper Aerodigestive Tract: When Do the Ends Justify the Means?

W. Jarrard Goodwin, Jr., MD

META-ANALYSIS
1633 Patients
32 Different Institutions

CONCLUSION
Expected efficacy for salvage surgery in patients with recurrent head & neck cancer was surprisingly good.

CONCLUSION

Expected Efficacy of SALVAGE SURGERY :

1. Strong correlation : with the stage of recurrent cancer (70% : Early disease : SS justifiable)
2. Survival and DFS : best correlation – recurrent stage
3. Improvement in the quality of life : correlation with stage & site

Received: 5 March 2021 | Revised: 5 September 2021 | Accepted: 15 October 2021

DOI: 10.1002/hed.26898

CLINICAL REVIEW

WILEY

Salvage surgery for recurrent squamous cell carcinoma of the head and neck: Systematic review and meta-analysis

Mustafa G. Bulbul MD, MPH[1,2] | Timothy J. Genovese MPH[2,3] | Kobina Hagan MD, MPH[2,4] | Soham Rege MPH[2,5] | Ahad Qureshi MD[2,6] | Mark A. Varvares MD[6,7]

Retrospective studies (15)

Meta-analysis of HR estimates

No RCT

Received: 5 March 2021 | Revised: 5 September 2021 | Accepted: 15 October 2021

DOI: 10.1002/hed.26898

CLINICAL REVIEW

WILEY

Salvage surgery for recurrent squamous cell carcinoma of the head and neck: Systematic review and meta-analysis

Mustafa G. Bulbul MD, MPH[1,2] | Timothy J. Genovese MPH[2,3] | Kobina Hagan MD, MPH[2,4] | Soham Rege MPH[2,5] | Ahad Qureshi MD[2,6] Mark A. Varvares MD[6,7]

15 studies :

5- year OS : Salvage surgery group
(26 – 67 %)

Non-surgical group
(0 -- 32 %)

6 studies : Mortality rate : one- fourth in the surgical group
(salvage surgery vs non-surgical group)

CLINICAL REVIEW

David W. Eisele, MD, *Section Editor*

Decision making in the management of recurrent head and neck cancer

Allen S. Ho, MD,[1] Dennis H. Kraus, MD,[1] Ian Ganly, MD, PhD,[1] Nancy Y. Lee, MD,[2] Jatin P. Shah, MD,[1] Luc G. T. Morris, MD, MSc[1]*

[1]Head and Neck Service, Department of Surgery, Memorial Sloan-Kettering Cancer Center, New York, New York, [2]Department of Radiation Oncology, Memorial Sloan-Kettering Cancer Center, New York, New York

Prognostic factors (patient factors) *

(Allen S et al. Head & Neck 2013)

Positive factors	Negative factors
• 1. Good KPS (100-80)	• Poor performance status
• 2. Good functional status	• Poor functional status
• 3. No comorbidity	• Comorbidities

Prognostic factors (tumour factors)*

*(Allen S et al. Head & Neck 2013)

Positive factors	Negative factors
• Early disease	• Stage – III & IV
• Long DFI	• Short DFI
• Larynx : better	• Non- laryngeal site
• No previous treatment	• Previous chemotherapy

Prognostic factors (tumour factors)

- Patients with good chance of cure :

    1. Surgically resectable
    2. Have long DFI
    3. No nodal metastases
    4. Early disease

ELSEVIER

Critical Reviews in Oncology/Hematology

Volume 169, January 2022, 103550

Prognostic factors in salvage surgery for recurrent head and neck cancer: A systematic review and meta-analysis

Valentina Lupato [a], Vittorio Giacomarra [a], Salvatore Alfieri [b], Giuseppe Fanetti [c], Jerry Polesel [d]

Show more

+ Add to Mendeley Share Cite

Poor prognostic factors:-

PRE SURGERY:-

- Age >60
- Advanced stage disease
- Early recurrence
- Regional failure

POST SURGERY:-

- Positive margin
- Extracapsular spread
- Perineural invasion

Surgical salvage even with negative margins :

Overall failure rate : 47% *

Radiation & chemotherapy resistance

Submucosal microscopic nests (multiple)

Perineural / perivascular / perilymphatic invasion

*Jones AS. *Br J Cancer*1996;74: 128-132

frontiers | Frontiers in Oncology

TYPE Original Research
PUBLISHED 01 November 2022
DOI 10.3389/fonc.2022.1017630

Check for updates

OPEN ACCESS

EDITED BY
Arun Khattri,
Indian Institute of Technology (BHU), India

REVIEWED BY
Ata Garajei,
Tehran University of Medical Sciences, Iran
Valentina Lupato,
Azienda Ospedaliera Santa Maria degli Angeli Pordenone, Italy

*CORRESPONDENCE
Zhien Feng
jyfzhen@126.com

†These authors have contributed equally to this work

SPECIALTY SECTION
This article was submitted to Head and Neck Cancer,

The application of salvage surgery improves the quality of life and overall survival of extensively recurrent head and neck cancer after multiple operation plus radiotherapy

Lirui Zhang†, Qiaoshi Xu†, Huan Liu, Bo Li, Hao Wang, Chang Liu, Jinzhong Li, Bin Yang, Lizheng Qin, Zhengxue Han and Zhien Feng*

Department of Oral and Maxillofacial-Head and Neck Oncology, Beijing Stomatological Hospital, Capital Medical University, Beijing, China

2015 ---- 2021

QOL : QLQ – HN35
UW-QOL

1362 PATIENTS

Results :

Median OS : better – Surgical arm

Mean Overall QOL score : higher --- surgical arm

CONCLUSION

Salvage surgeries : Radical , morbid , technically challenging .

Over riding goal in Salvage treatment : Accept survival , NOT function .

Advances in reconstructive surgery : more patients for salvage resection / less complications .

CONCLUSION

TREATMENT OF RECURRENT CANCERS

TRADE OFF :

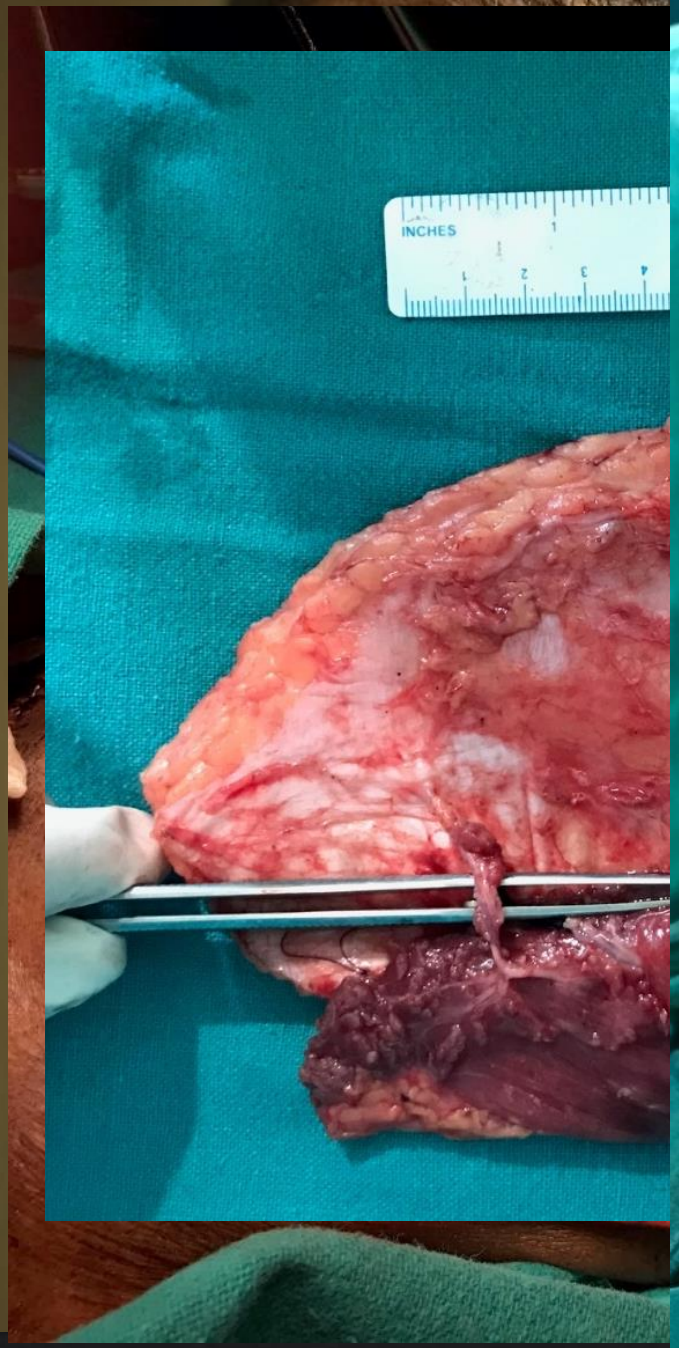
TREATMENT morbidity

TREATMENT toxicity

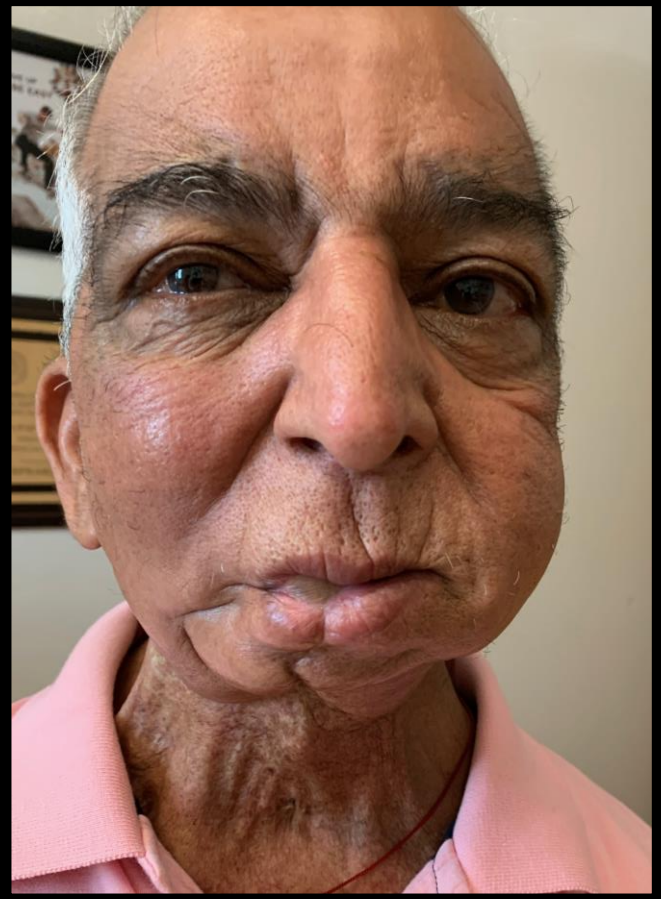
Potential to CURE

Questions - unanswered

- 1. Salvage surgery vs salvage re- irradiation / chemoradiation : in resectable disease : any improvement in OS (SS)
- 2. Immunotherapy vs Salvage surgery
- 3. Salvage surgery vs Palliative care : QOL outcomes.



Extensive recurrence
reconstructed with free ALT flap



Multiple Recurrences- Salvaged surgically


Acknowledgement
DR. SANDEEP MEHTA
Onco-reconstructive surgeon
THANK YOU