Management of Recurent & metastatic Head & Neck Squamous Cell Carcinoma

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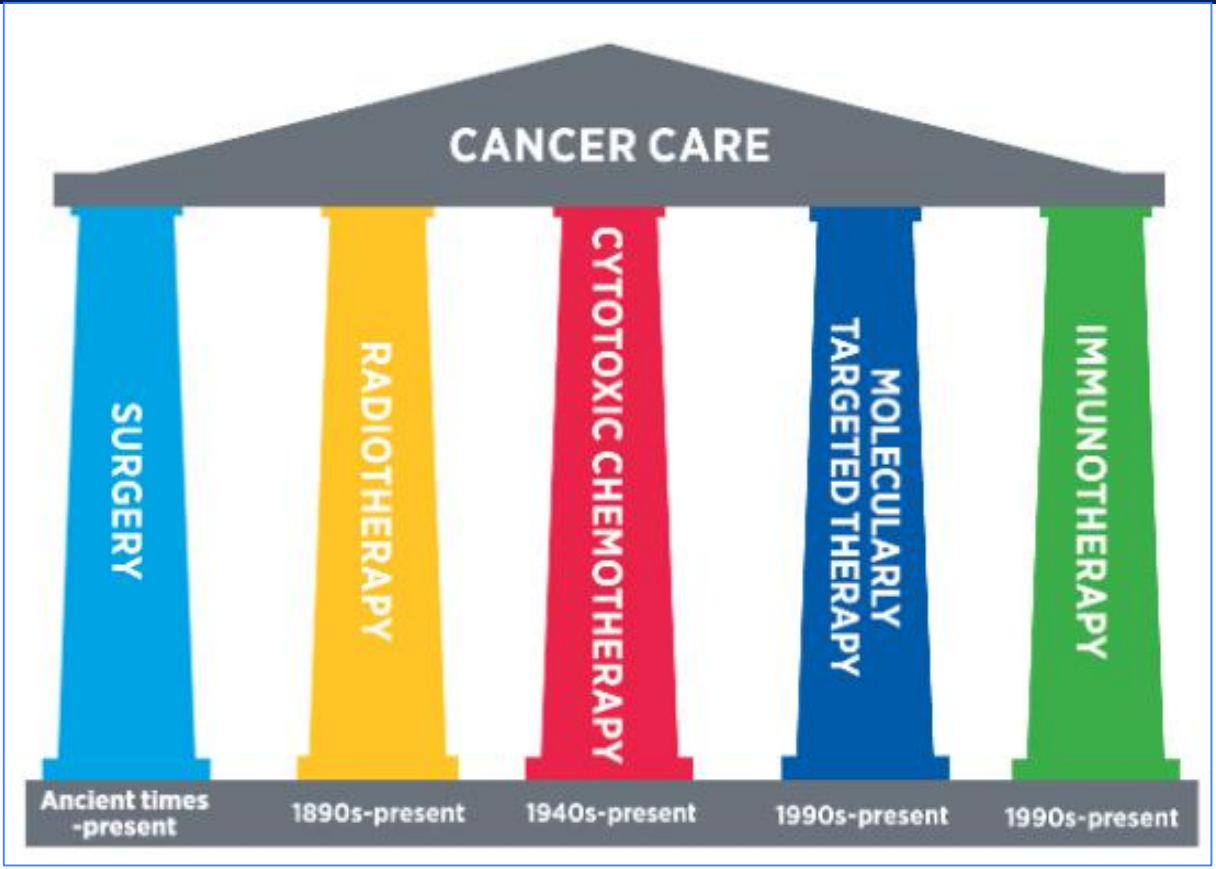
Pillars of Oncology care



Case1

Ca left GBS , PDSCC, pT1pN2aM0, ENE+

Age-63, PS-1

Routine labs- ok, ECG- wnl

2D Echo- Jerky motion of IVS.

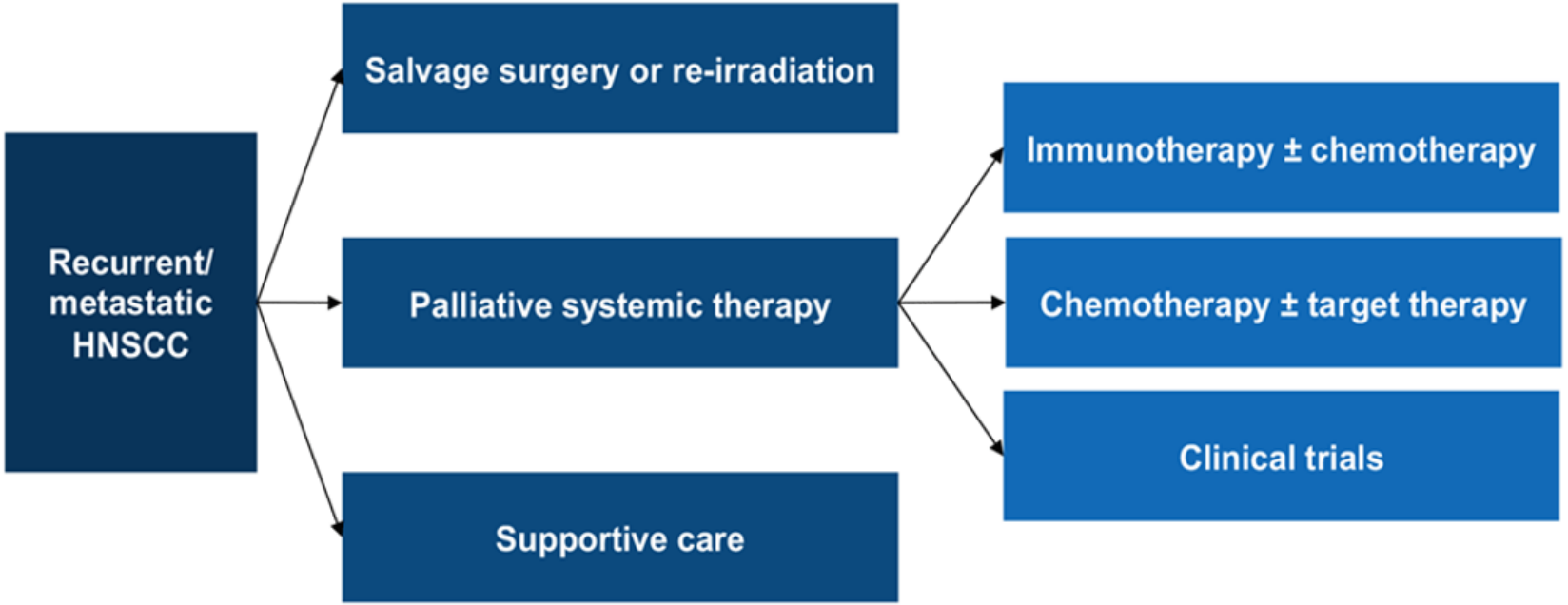
LV systolic function normal.

LVEF= 60%

DTPA GFR- 68 ml/min

- Underwent CTRT
- Fails within 5 months in lymph node same side which was within RT portal
- Options?

Management of Recurrent SCCHN



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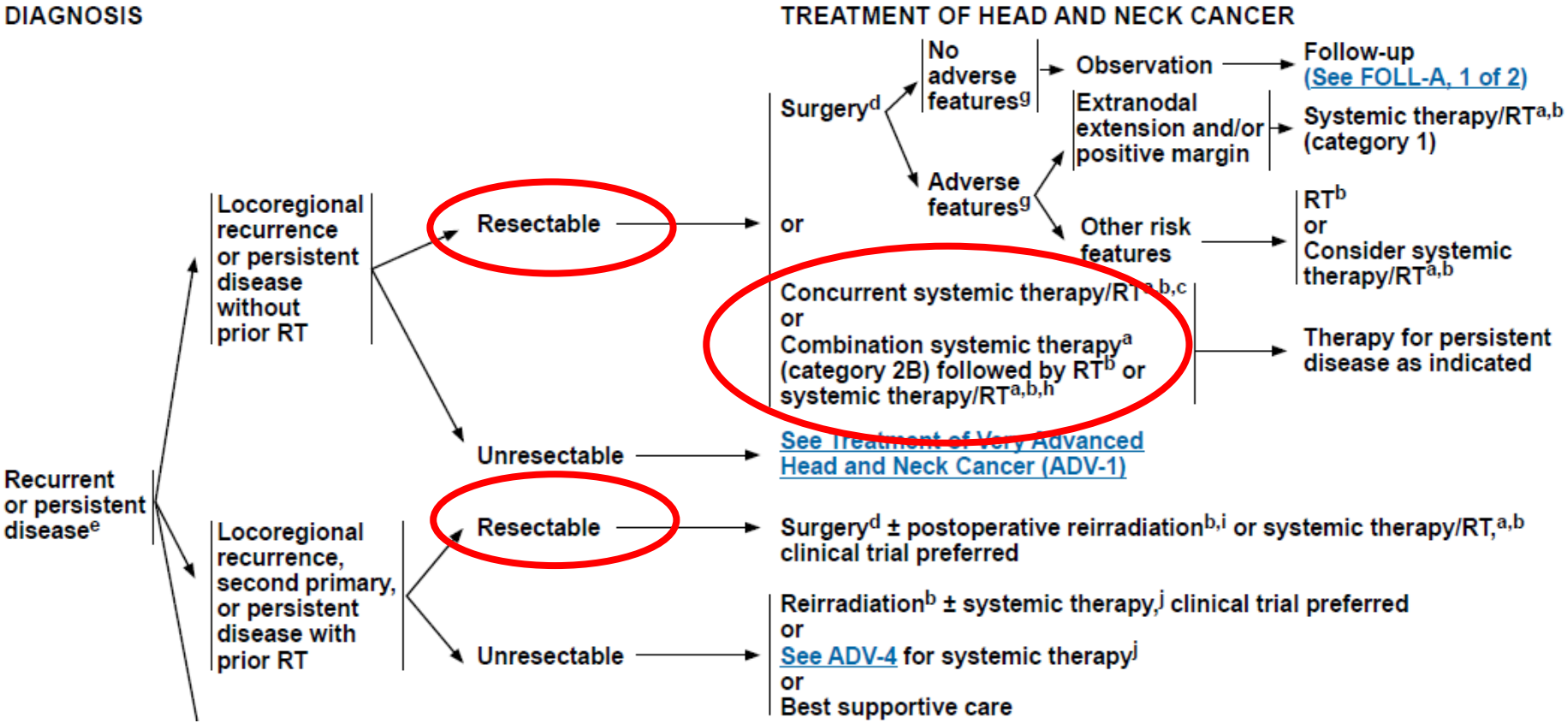
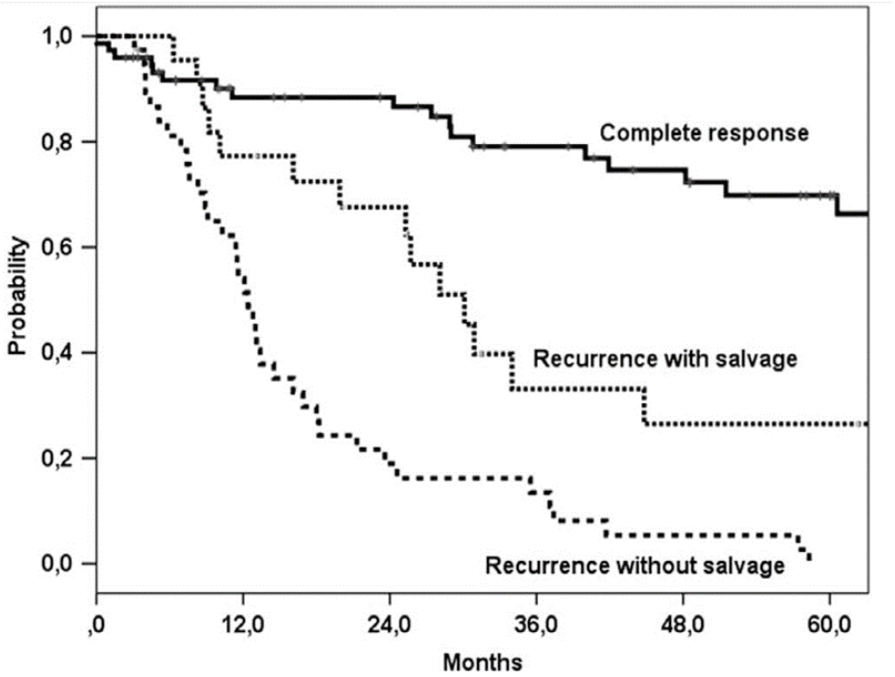
Very Advanced Head and Neck Cancer



Role of salvage surgery in recurrent head neck cancers

- Challenges
- Advantages
- Disadvantages
- Prognostic factors
- Selection of cases
- Complications
- Reconstruction

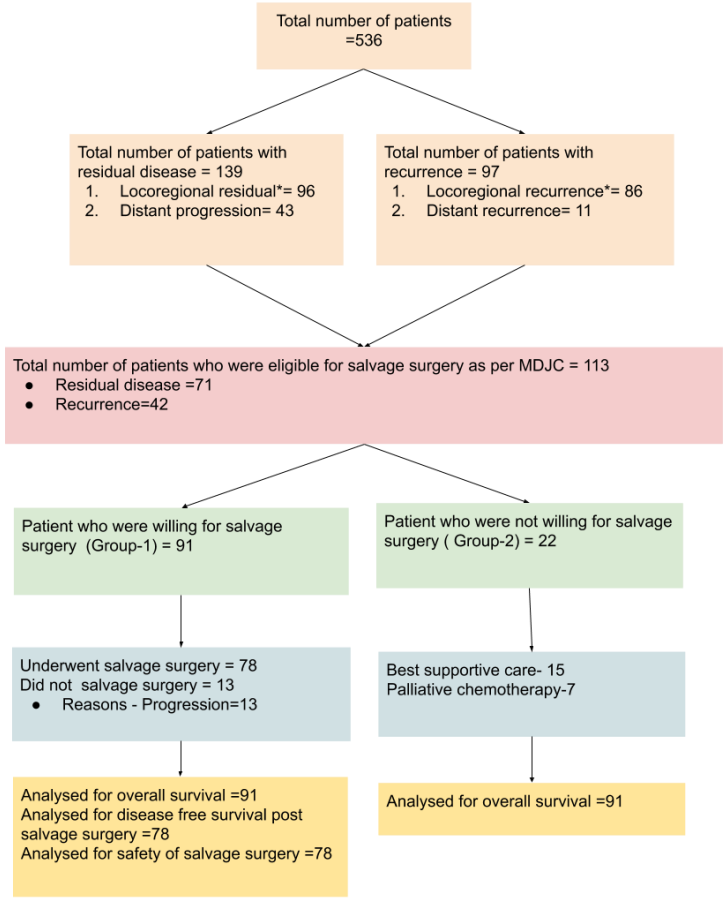
Overall survival for laryngeal and hypopharyngeal cancer with initial chemoradiation treatment with and without salvage surgery



Author	N	Site	2-year OS (%)	5-year OS (%)
Liu et al. (2007)	1,282	OC		31.6
Tam et al. (2017)	293	OC		43
Quinlan-Davidson et al. (2017)	78	OC		59
Sun et al. (2009)	81	OC		20
Chung et al. (2019)	73	OC		54.8
Horn et al. (2020)	32	OC		41.7
Zafereo et al. (2009)	41	OP	34	28
Nichols et al. (2011)	32	OP	64	43
Righini et al. (2012)	105	OP	31	21
Philouze et al. (2017)	52	OP	43	31
Hay et al. (2019)	25	OP		44
Agra et al. (2006)	264	OC/OP		32.3
Zenga et al. (2019)	102	OC/OP		31

Van der Putten et al. Acta Otorhinolaryngologica Italica, 35(3), 162–172., 2015

Positive prognosticators in Salvage Surgery
Laryngeal recurrence
Early-stage recurrence
No previous chemotherapy
HPV positivity (OPSCC)
Clear surgical margins
≤N1 and no extracapsular spread
DFI > 6 months
MDT involvement
No comorbidities
Adequate perioperative nutritional/ electrolyte status



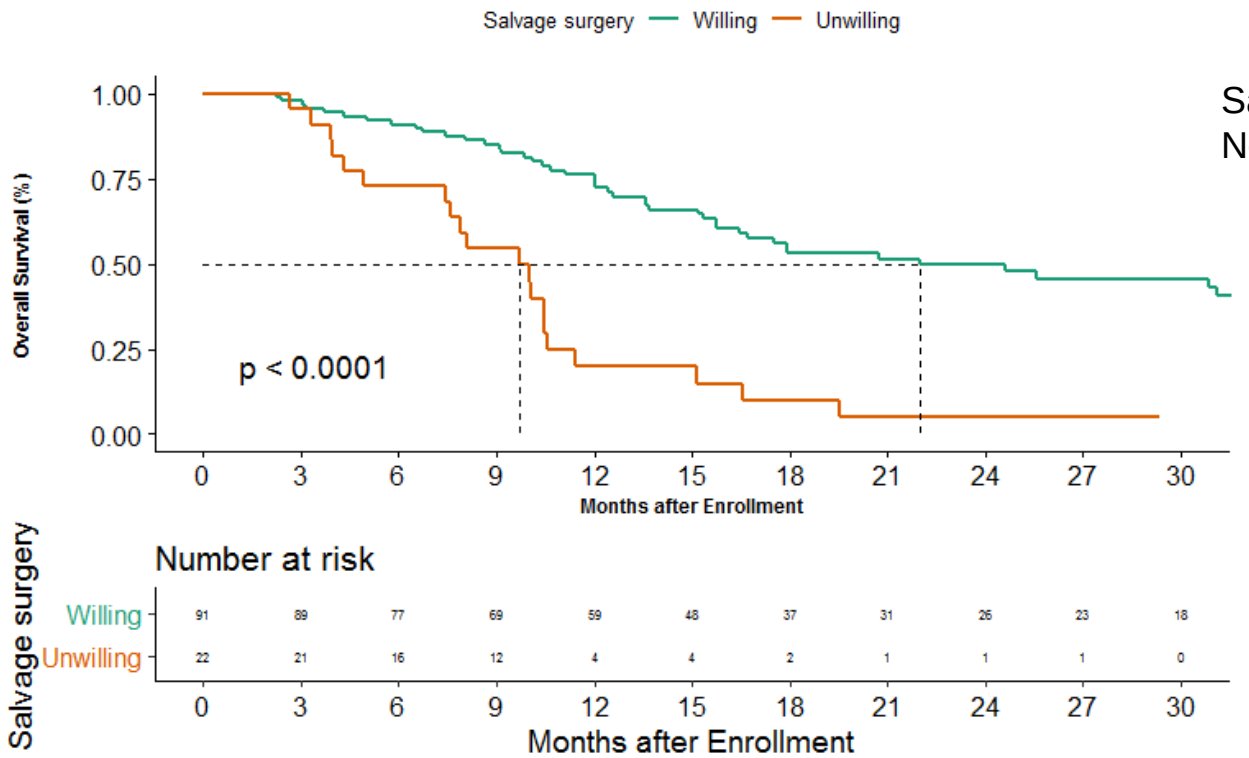
*-These are patients with locoregional disease only that is without any distant metastasis
MDJC- Multidisciplinary joint clinic

In whom to consider? resectable

Primary	Neck
Larynx/Hypopharynx · Lesion involving the tonsil and/or base of tongue extensively, · Prevertebral fascia involvement, · Lesion extending inferiorly into the thoracic esophagus	Nodal disease · Encasement of the CCA/ICA > 180 degrees on imaging, · Unable to identify the upper stump or the lower stump of the IJV on imaging, · Involvement of the prevertebral fascia.
Oropharynx: · Involvement of the Lateral pterygoid involvement, · Lesion extending into the nasopharynx, · Pre-epiglottic space involvement, · Lesion on the base of tongue crossing midline and abutting or involving the hyoid bone.	

V.M. Patil et al. / European Journal of Surgical Oncology 46 (2020) 1052e1058

Salvage surgery



Salvage Surgery- n=78
No Surgery= 22

Overall survival at 30 months

Salvage surgery was 22.0 months

No suregery= 9.7 months

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Salvage surgery done- Adjuvant Rx?

- Chemotherapy
- Immunotherapy
- Re irradaition

Journal of Clinical Oncology > List of Issues > Volume 39, Issue 15_suppl >

Meeting Abstract | 2021 ASCO Annual Meeting I

Article Tools

HEAD AND NECK CANCER

Adjuvant nivolumab following salvage resection in head and neck squamous cell carcinoma patients previously treated with definitive therapy: A single-arm phase II multi-institutional study.

The 2-year DFS was 60% (95%CI 0.39-0.91)

2-year overall survival was 74% (95% CI 0.54-1)

Conclusions: Nivolumab after salvage surgery in rHNSCC is well tolerated and shows promising antitumor activity in this high-risk patient population with unmet need. Immunotherapy after salvage surgery should be studied in RCTs

NACT ⟶ Salvage Sx?

Oral Oncol. 2016 May;56:e12-4. doi: 10.1016/j.oraloncology.2016.03.015. Epub 2016 Mar 31.

Technically unresectable recurrent oral cancers: Is NACT the answer?

Patil VM[1], Joshi A[1], Noronha V[1], Karpe A[1], Ramaswamy A[1], Dhumal S[1], Juvekar S[2], Arya S[2], Mahajan A[2], Chaturvedi P[3], Pai P[3], D'Cruz A[3], Prabhash K[4].

Baseline characteristics at recurrence.

Variable	Number (%)
Age	
18–60 years	33 (82.5%)
>60 years	07 (17.5%)
Gender	
Male	36 (90.0%)
Female	04 (10.0%)
Comorbidity	
No comorbidity	31 (77.5%)
Hypertension	04 (10.0%)
Diabetes mellitus	04 (10.0%)
Hypothyroidism	02 (05.0%)
Previous DFI	
<6 months	24 (60.0%)
=or >6 months	16 (40.0%)
Previous chemotherapy	
Yes	10 (25.0%)
Previous NACT	03 (07.5%)
TPF	01 (02.5%)
Docetaxel + carboplatin	01 (02.5%)
Ifosfamide + cisplatin	01 (02.5%)
Previous concurrent chemotherapy	07 (17.5%)
Cisplatin	06 (15.0%)
Cetuximab	01 (02.5%)
Sub-site of primary[a]	
Buccal mucosa primary	20 (50.0%)
Anterior ⅔ of tongue primary	11 (27.5%)
Alveolus	07 (17.5%)
Hard palate	01 (02.5%)
Retromolar trigone	01 (02.5%)

[a] Subsites depicted are based on the upfront epicenter of tumor location. DFI: Disease free interval of previous treatment. TPF; Docetaxel, cisplatin and 5FU.

The median progression free survival was 6.1 months (95% CI 2.0–8.0 months).

The median overall survival was 8.57 months (95% CI 6.53–12.23 months).

NACT in recurrent technically unresectable oral cancers with early failures (within 1 year) fails to improve the outcome.

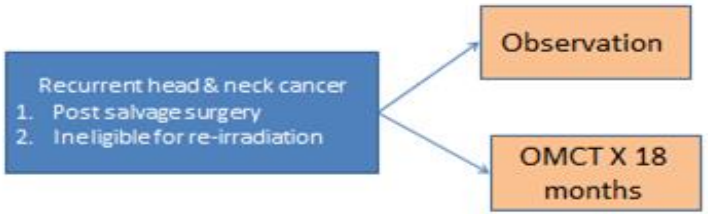
Selection of patients with longer DFI for such approach may improve outcomes.

Salvage Sx done but not fit for reradiation

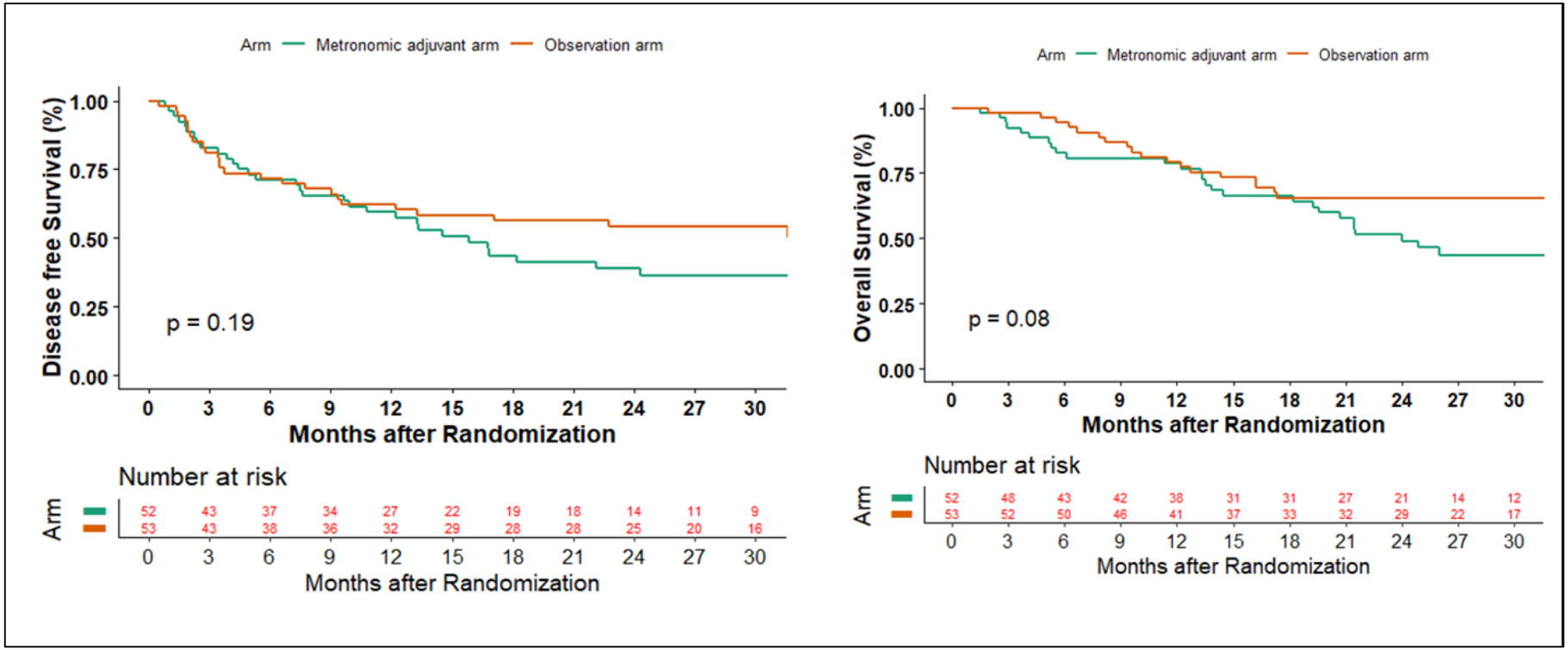
Situation

- Seen by radiation oncologist not fit for re-irradiation due to skin and subcutaneous changes of previous RT
- Do we require adjuvant ?
  - No : Observation only
  - Yes : Adjuvant chemotherapy

RMAC study

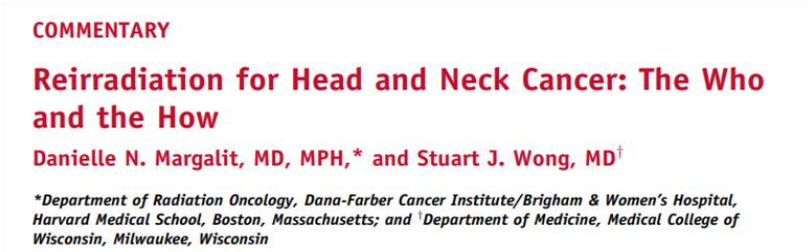


Patil V et al RMAC study: A randomized study for evaluation of metronomic adjuvant chemotherapy in recurrent head and neck cancers post salvage surgical resection in those who are ineligible for re-irradiation. Oral Oncol. 2022 May;128:105816



Patil V et al RMAC study: A randomized study for evaluation of metronomic adjuvant chemotherapy in recurrent head and neck cancers post salvage surgical resection in those who are ineligible for re-irradiation. Oral Oncol. 2022 May;128:105816

Reradiation



COMMENTARY

Reirradiation for Head and Neck Cancer: The Who and the How

Danielle N. Margalit, MD, MPH,* and Stuart J. Wong, MD†

*Department of Radiation Oncology, Dana-Farber Cancer Institute/Brigham & Women's Hospital, Harvard Medical School, Boston, Massachusetts; and †Department of Medicine, Medical College of Wisconsin, Milwaukee, Wisconsin

The 3 clinical factors -overall survival (OS) were used to parse patients into 3 statistically distinct "classes" with differing 2-year OS rates.

These factors were

1. Time between radiation therapy (RT) courses (>2 years vs 2 years)
2. Receipt of salvage surgery
3. Organ dysfunction, defined as pre-existing feeding tube or tracheostomy with an intact larynx.

Patients in class 1 had the best 2-year OS rate, at 61.9%, and were those with >2 years between RT courses and receipt of salvage surgery

Reirradiation for locally recurrent head and neck cancer

- After surgical salvage but have high-risk features.
- Medically suitable for curative-intent but not fit for surgery
- Better disease control
- Patient selection
- Radio resistance
- Treatment volume
- Dose
- Modality
- Brachytherapy/ SBRT
- Reirradiation with concurrent chemotherapy

Key landmark publications

Author	*n*	RT dose/#	Chemotherapy %	Survival outcomes %	Severe toxicity %
Dawson (2001) Michigan	40	1.8–2.0 Gy/fr (or 1.2 Gy BID) Median 60 Gy 3DCRT	33 platinum based	2 years LRC 29 2 years OS 32	Acute: 10 Late: 21 No deaths
Lee (2007) MSKCC	105	1.8–2.0 Gy/fr (or 1.2 Gy BID) Median 59 Gy IMRT	43 concurrent platinum based	2 years LRC 42 2 years OS 37	Acute: Grade 3+23 Late: Grade 3+12 No deaths
Sulman (2009) MDACC	74	2 Gy/fr Median 60 Gy IMRT	49 chemo concurrent±induction platinum based	2 years LRC 64 4 years LRC 50 2 years OS 58 4 years OS 43	Late: 20 severe toxicity 1 possible Rx related death
Popovtzer (2009) Michigan	66	1.8–2.0 Gy/fr or 1.25 Gy BID Median 68 Gy 3DCRT/IMRT	71 Cis/Carbo Cis-5FU in hyperfrx	2 years LRC 27 5 years LRC 19 2 years OS 40 5 years OS 22	Late: 18 severe 1 death from ARF
Duprez (2009) Ghent	84	2.0–2.5 Gy/fr Median 69 Gy IMRT	20 platinum based	2 years LRC 48 5 years LRC 40 2 years OS 35 5 years OS 20	Acute: 30 grade 3+ Late: 13 grade 3+ No deaths

RT–Radiotherapy; IMRT–Intensity-modulated radiation therapy; 3DCRT–Three-dimensional conformal radiation therapy; ARF–Acute renal failure; LRC–Locoregional control; OS–Overall survival; 5FU–5-fluorouracil

Role of chemotherapy in recurrent setting

- NACT
- Concurrent
- Adjuvant
- Targeted therapy
- Immunotherapy

The SCCHN treatment landscape is evolving and has become more complex

Throughout the 1970s, 80s and 90s chemotherapy was the only treatment for R/M SCCHN[1–3]

In 2008, the EXTREME trial demonstrated an improvement in outcomes when Cetuximab was added to CT[4]

In 2016–18, ICI therapy demonstrated improved outcomes in platinum-refractory disease or 2L[5,6]

In 2019, multiple new treatment options entered the 1L landscape[7,8]

In 2020, long OS was seen using the TPEx regimen followed by ICI therapy[9]

OS: **6** months → **10** months → **11** months → **14** months → **21** months

2L OS

PRINCIPLES OF SYSTEMIC THERAPY FOR NON-NASOPHARYNGEAL CANCERS
(Lip, Oral Cavity, Oropharynx, Hypopharynx, Glottic Larynx, Supraglottic Larynx, Ethmoid Sinus, Maxillary Sinus, Occult Primary)

- **The choice of systemic therapy should be individualized based on patient characteristics (eg, PS, goals of therapy).**

Recurrent, Unresectable, or Metastatic (with no surgery or RT option)

Preferred Regimens

First-Line[c]
- Pembrolizumab/platinum (cisplatin or carboplatin)/5-FU (category 1)[c,30]
- Pembrolizumab (for tumors that express PD-L1 with CPS ≥1) (category 1 if CPS ≥ 20)[c,30]

Subsequent-Line (if not previously used)
- Nivolumab[31] (if disease progression on or after platinum therapy) (category 1)
- Pembrolizumab[32-34] (if disease progression on or after platinum therapy) (category 1)

Other Recommended Regimens
(First- and Subsequent-Line)

Combination Regimens
- Cetuximab/platinum (cisplatin or carboplatin)/5-FU[35] (category 1)
- Cisplatin/cetuximab[36]
- Cisplatin or carboplatin/docetaxel[37] or paclitaxel[38]
- Cisplatin/5-FU[38,39]
- Cisplatin or carboplatin/docetaxel/cetuximab[40]
- Cisplatin or carboplatin/paclitaxel/cetuximab[41]
- Pembrolizumab/platinum (cisplatin or carboplatin)/docetaxel[30,37]
- Pembrolizumab/platinum (cisplatin or carboplatin)/paclitaxel (category 2B) [30,38]

Single Agents
- Cisplatin[36,42]
- Carboplatin[43]
- Paclitaxel[44]
- Docetaxel[45,46]
- 5-FU[42]
- Methotrexate[39,47]
- Cetuximab[48]
- Capecitabine[49]
- Afatinib[50] (subsequent-line only, if disease progression on or after platinum therapy) (category 2B)

Useful in Certain Circumstances
(First- and Subsequent-Line)
- Cetuximab/pembrolizumab (category 2B)[51]
- For select ethmoid/maxillary sinus cancers (small cell, SNEC, high-grade olfactory esthesioneuroblastoma, SNUC with neuroendocrine features):
  - Cisplatin/etoposide or carboplatin/etoposide[14]
  - Cyclophosphamide/doxorubicin/vincristine (category 2B)[15]
- Pembrolizumab (for MSI-H tumors)[52]

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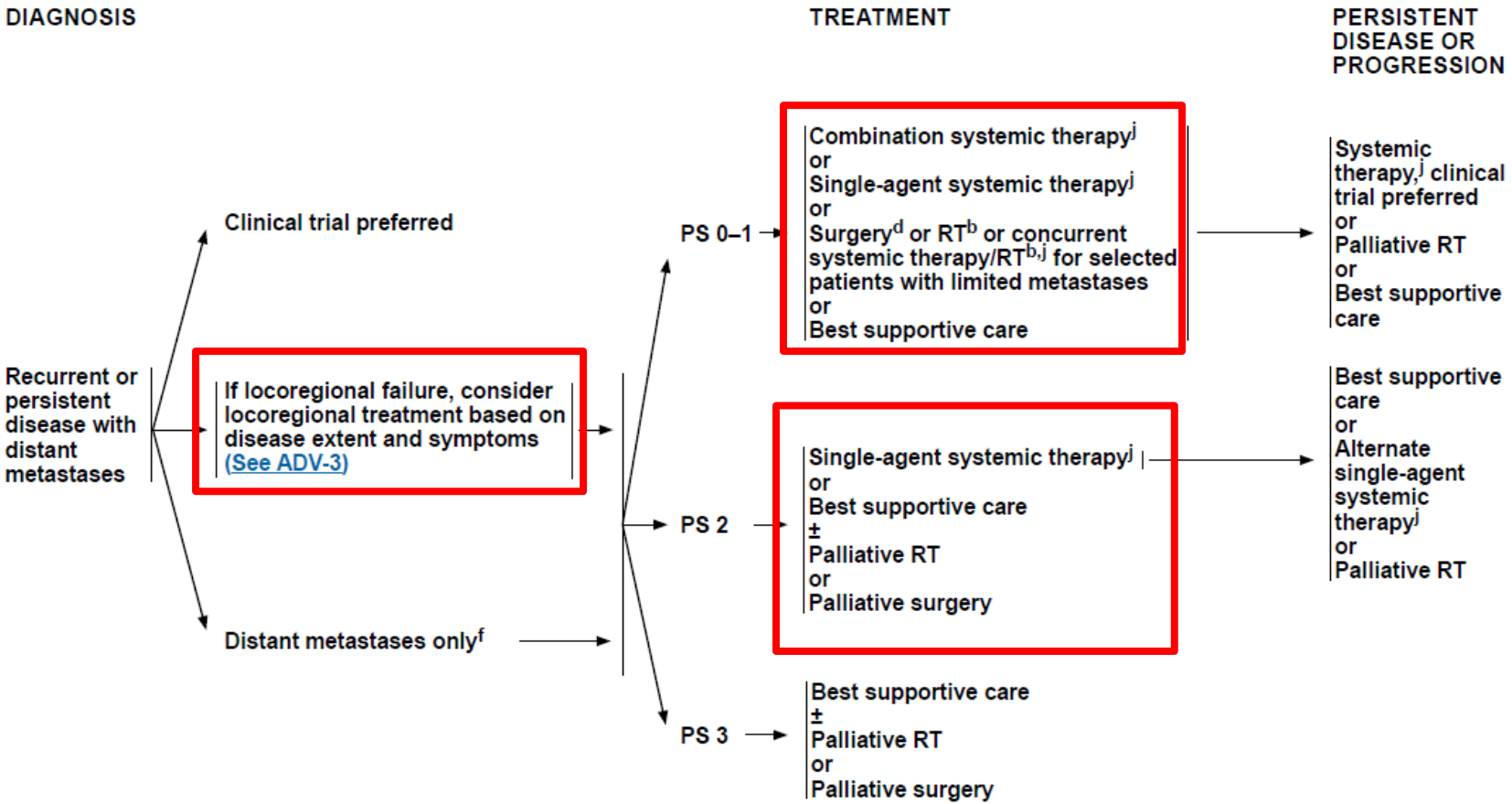
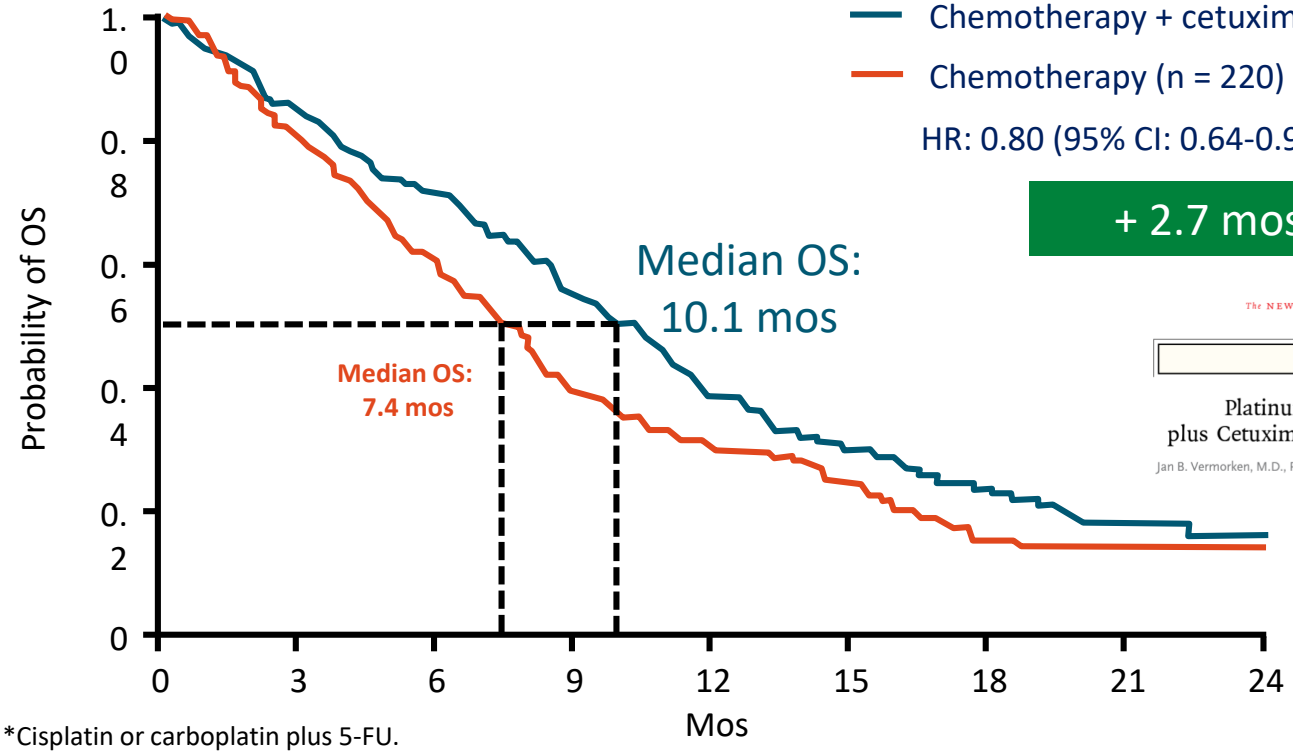
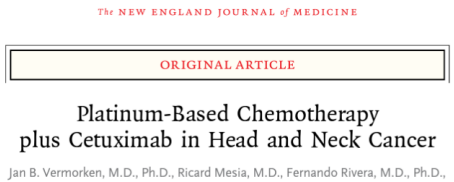
Very Advanced Head and Neck Cancer



EXTREME Chemotherapy* + Cetuximab: OS

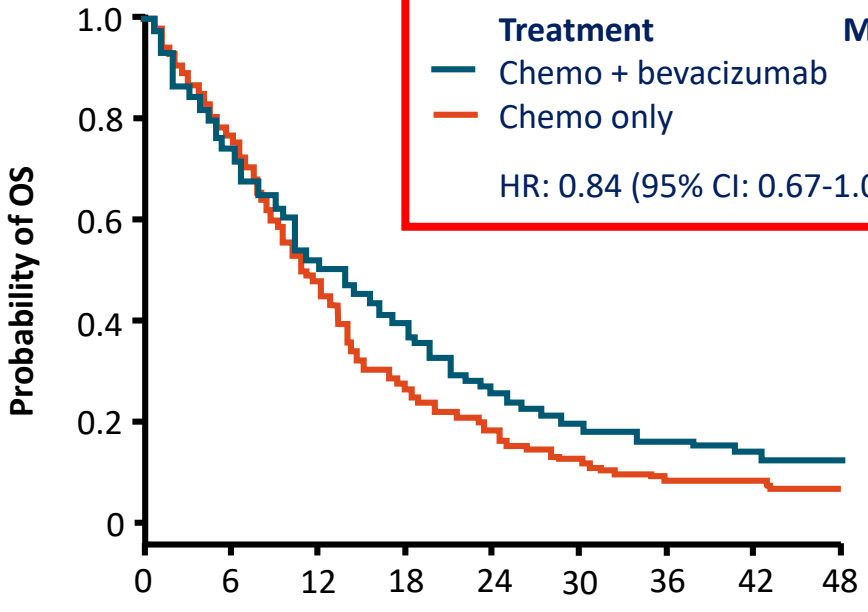


*Cisplatin or carboplatin plus 5-FU.



Vermorken. NEJM. 2008;359:1116.

Phase III E1305 Trial of Chemotherapy* ± Bevacizumab in Recurrent/Metastatic HNSCC: OS



Treatment	Median OS, Mos
Chemo + bevacizumab	12.6
Chemo only	11.0

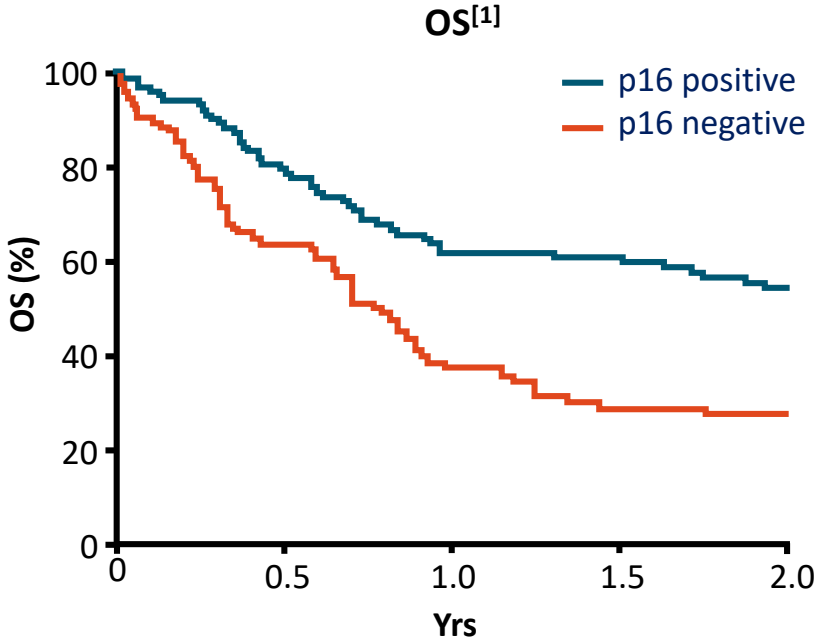
HR: 0.84 (95% CI: 0.67-1.05; *P* = .13)

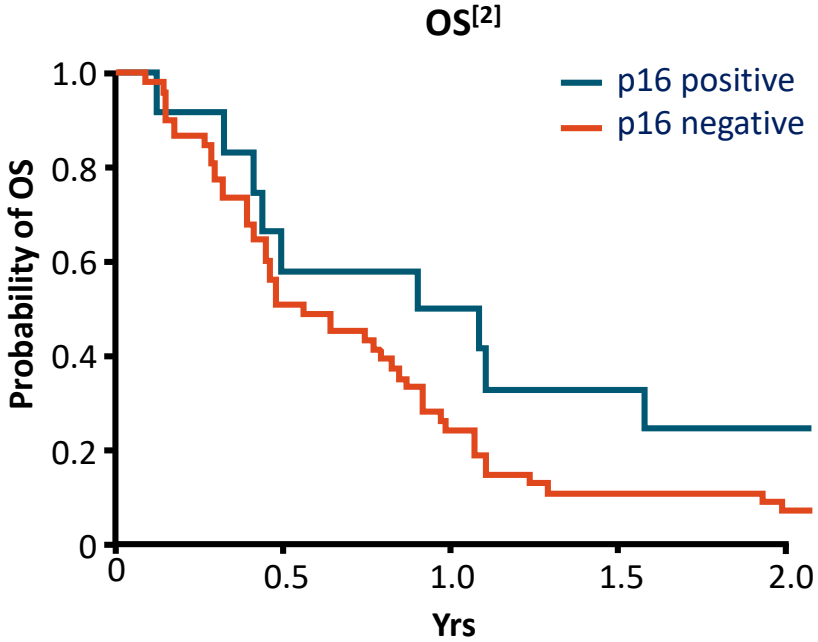
Patients at Risk, n									
Chemo + bevacizumab	203	144	98	73	41	28	18	13	11
Chemo only	200	145	88	51	30	18	11	9	7

Argiris. J Clin Oncol. 2019;37:3266.

*Cisplatin or carboplatin plus docetaxel or FU.

Survival in Recurrent/Metastatic p16-Positive HNSCC





1. Fakhry. J Clin Oncol. 2014;32:3365. 2. Argiris. Ann Oncol. 2014;25:1419.

Palliative systemic therapy?
Options in Platinum refractory

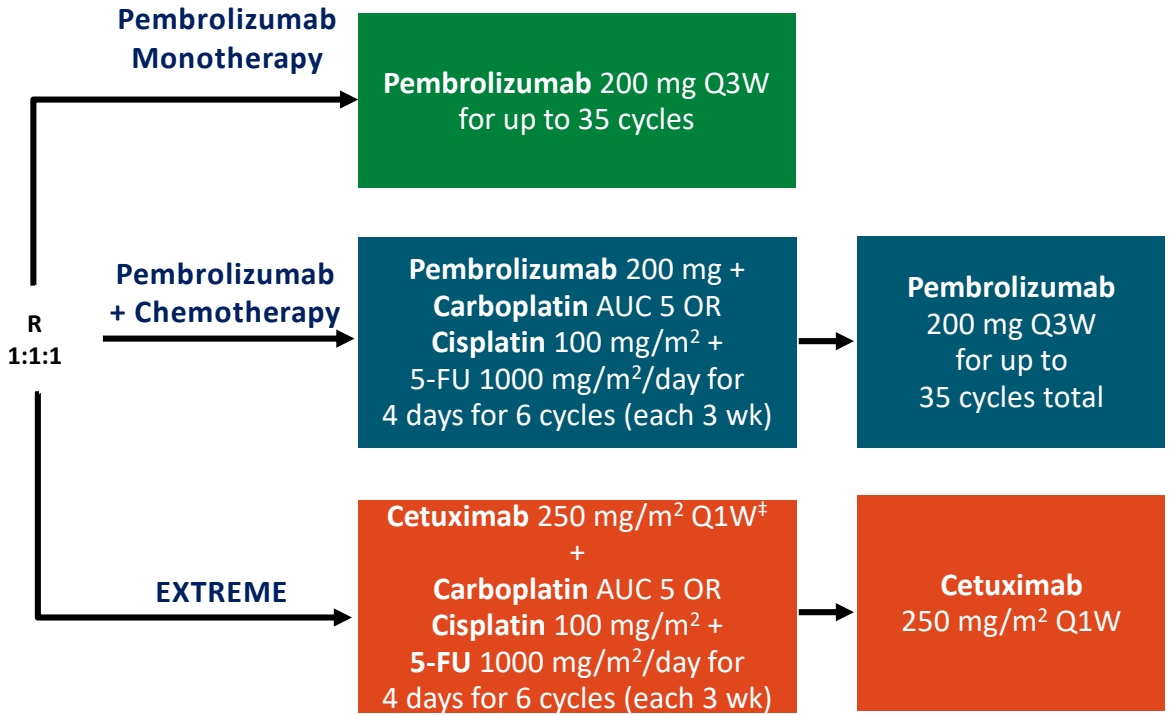
KEYNOTE-048: Study Design

Key Eligibility Criteria

- SCC of the oropharynx, oral cavity, hypopharynx, or larynx
- R/M disease incurable by local therapies
- ECOG PS 0 or 1
- Tissue sample for PD-L1 assessment*
- Known p16 status in the oropharynx†

Stratification Factors

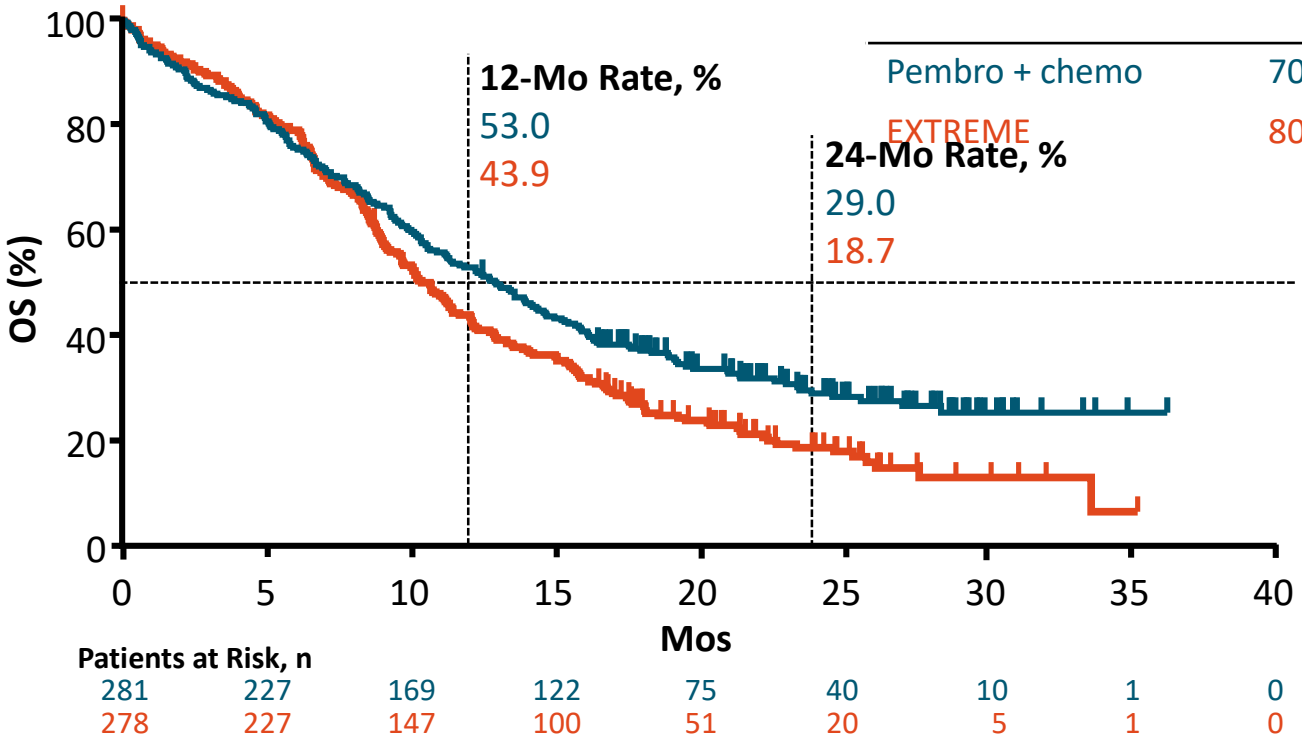
- PD-L1 expression* (TPS ≥ 50% vs < 50%)
- p16 status in oropharynx (positive vs negative)
- ECOG PS (0 vs 1)



*Assessed using the PD-L1 IHC 22C3 pharmDx assay (Agilent) †Assessed using the CINtec p16 Histology assay (Ventana); cutpoint for positivity: 70%. ‡Following a loading dose of 400 mg/m².

Burtness. Lancet. 2019;394:1915.

KEYNOTE-048: OS for Pembrolizumab + Chemotherapy vs EXTREME



	Events	HR (95% CI)	*P* Value
Pembro + chemo	70%	0.77 (0.63-0.93)	.0034
EXTREME	80%		

Median OS, Mos (95% CI)

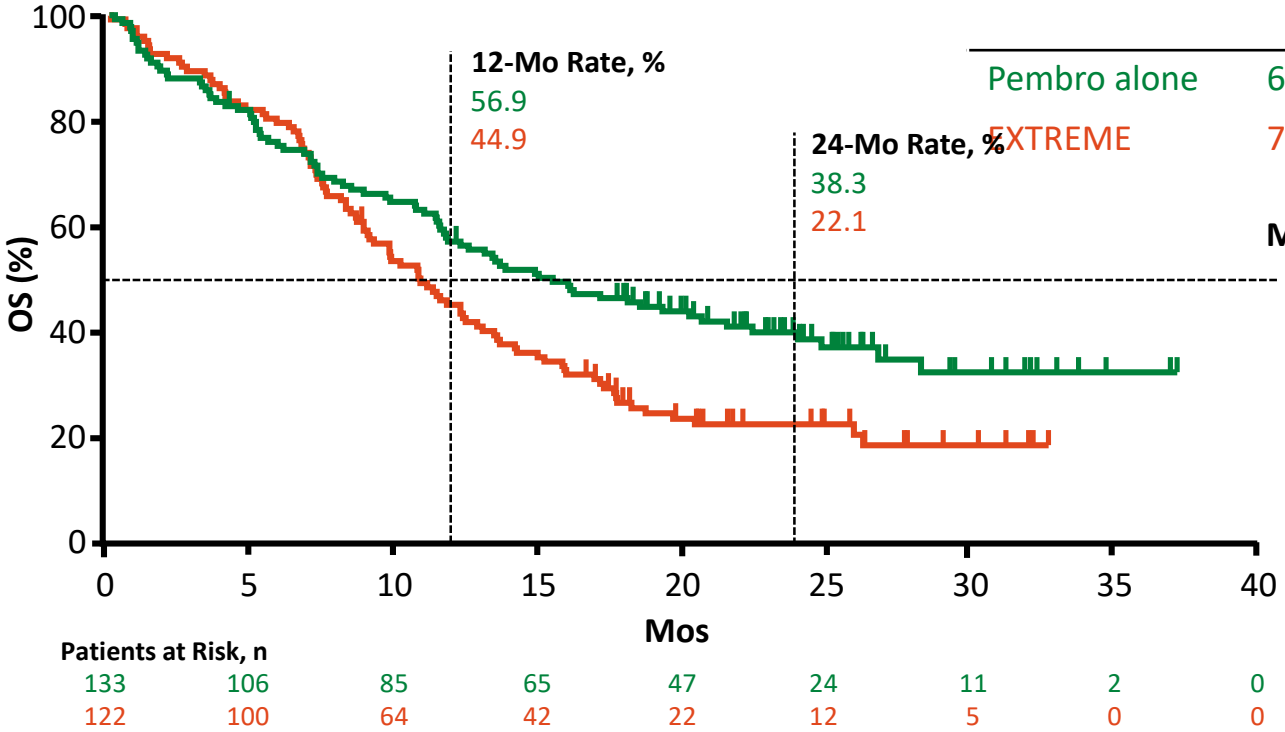
13.0 (10.9-14.7)

10.7 (9.3-11.7)

Burtness. Lancet. 2019;394:1915.

Data cutoff date: Jun 13, 2018.

KEYNOTE-048: OS (CPS ≥ 20) for Pembrolizumab vs EXTREME



	Events	HR (95% CI)	*P* Value
Pembro alone	62%	0.61 (0.45-0.83)	.0007
EXTREME	78%		

Median OS, Mos (95% CI)

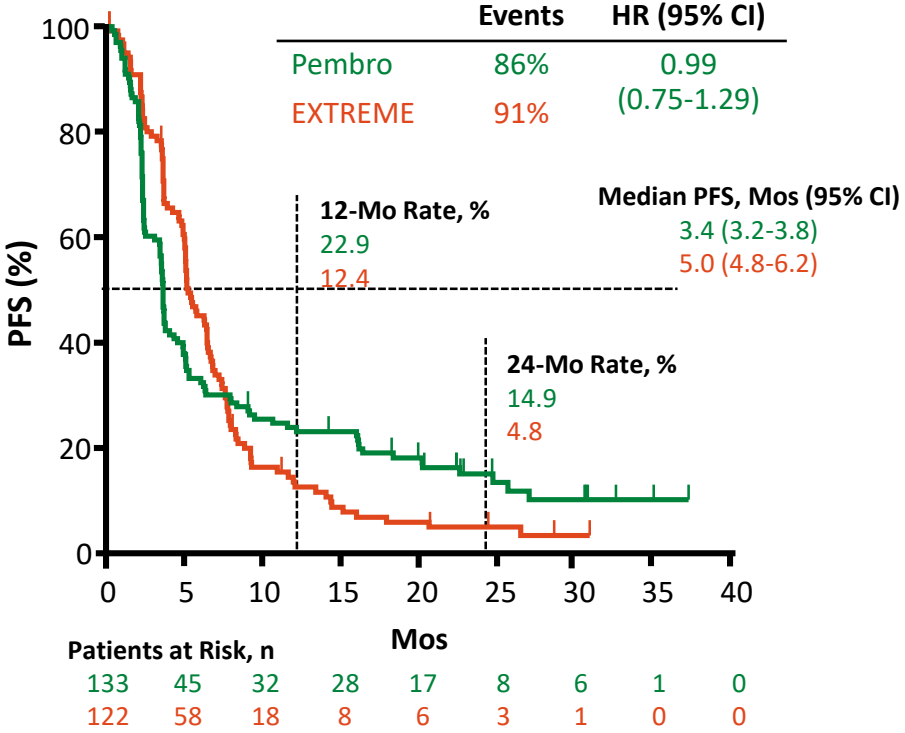
14.9 (11.6-21.5)

10.7 (8.8-12.8)

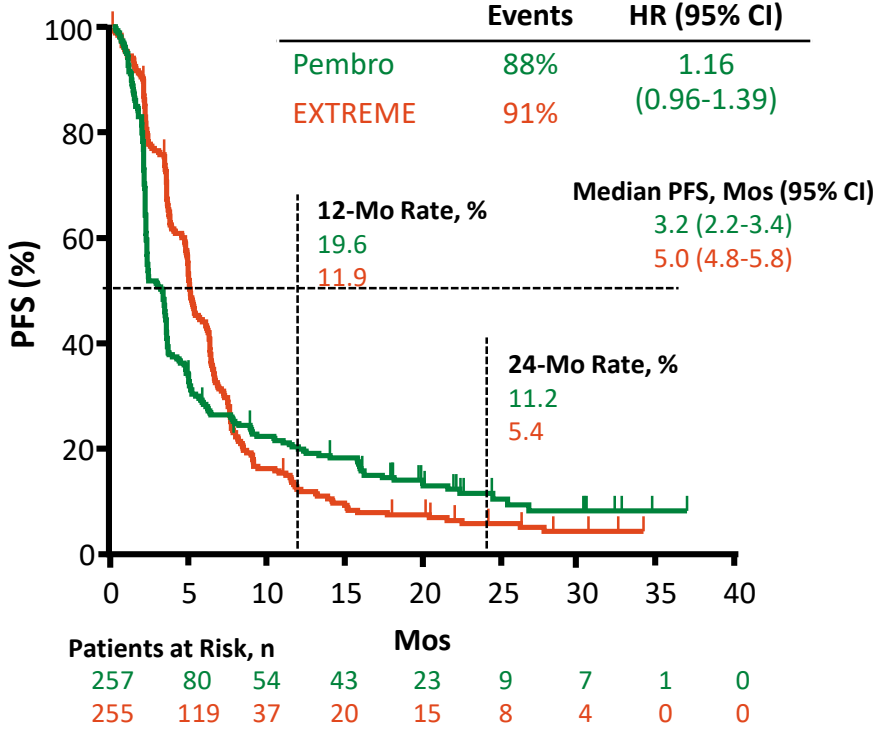
Burtness. Lancet. 2019;394:1915.

KEYNOTE-048: PFS for Pembrolizumab vs EXTREME

CPS ≥ 20



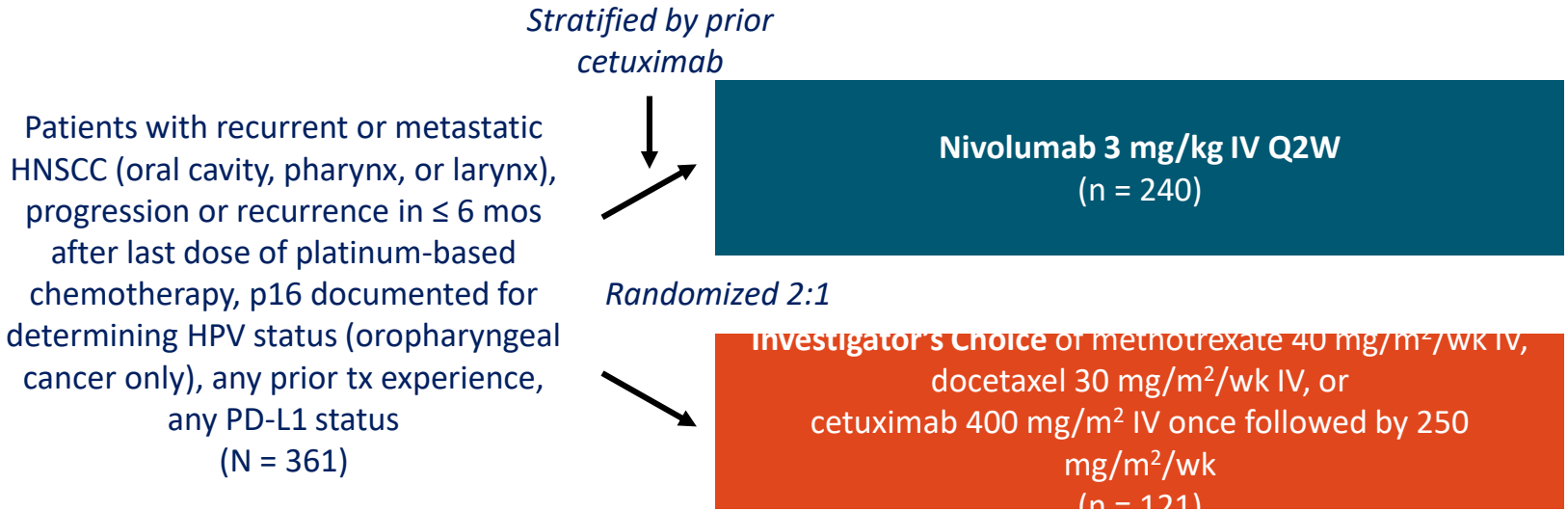
CPS ≥ 1



Burtness. Lancet. 2019;394:1915.

PFS assessed per RECIST v1.1 by blinded, independent central radiologic review.

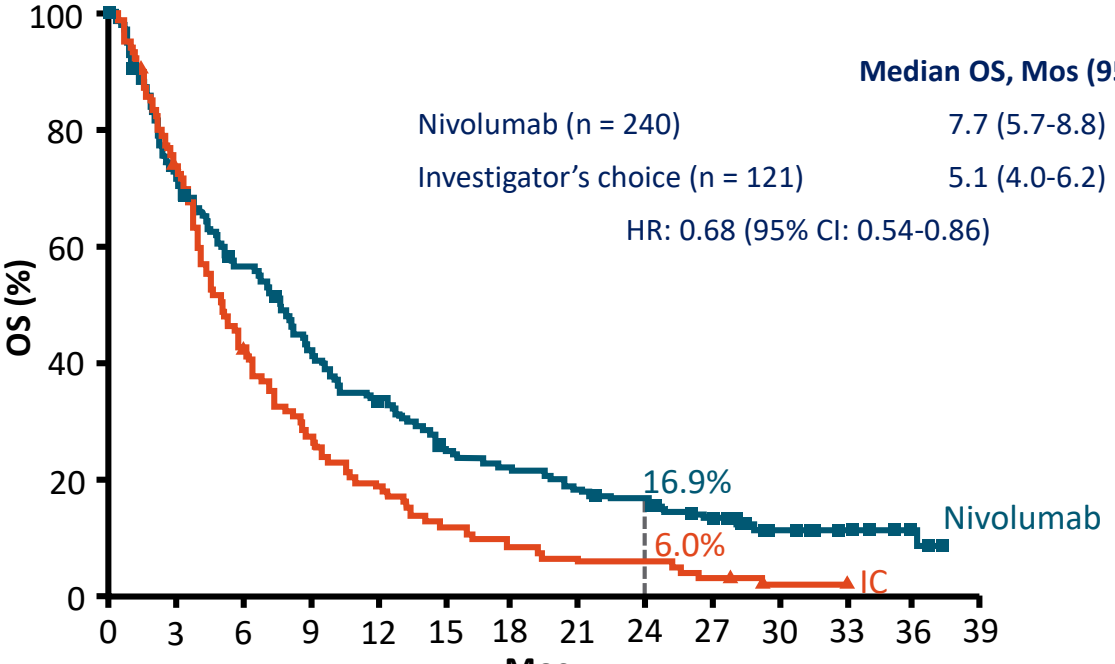
Phase III CheckMate 141: Nivolumab in Recurrent/Metastatic HNSCC After Platinum Therapy



- Primary endpoint: OS
- Other endpoints: PFS, ORR, DoR, safety, biomarkers, QoL

Ferris. NEJM. 2016;375:1856.

CheckMate 141: OS for Nivolumab vs Investigator's Choice in Recurrent/Metastatic HNSCC



	Median OS, Mos (95% CI)	ORR, %
Nivolumab (n = 240)	7.7 (5.7-8.8)	13.3
Investigator's choice (n = 121)	5.1 (4.0-6.2)	5.8

HR: 0.68 (95% CI: 0.54-0.86)

Patients at Risk, n													
Nivolumab	240	169	132	98	78	57	50	42	37	28	15	10	4	0
IC	121	88	51	32	23	14	10	8	7	4	1	1	0	0

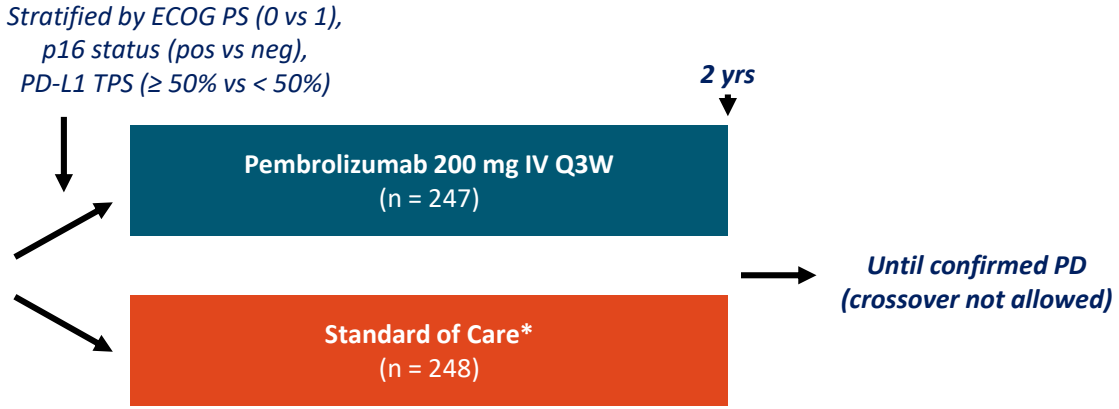
Ferris. Oral Oncol. 2018;81:45.

KEYNOTE-040: Pembrolizumab vs Standard of Care in Recurrent/Metastatic HNSCC

Patients with SCC of oral cavity, oropharynx, hypopharynx, or larynx, and:

- recurrent disease or PD 3-6 mos after multimodal tx with platinum or PD after platinum-based tx for RM HNSCC
- ≤ 2 prior tx for RM HNSCC
- known p16 status with oropharynx disease
- ECOG PS 0/1

(N = 495)

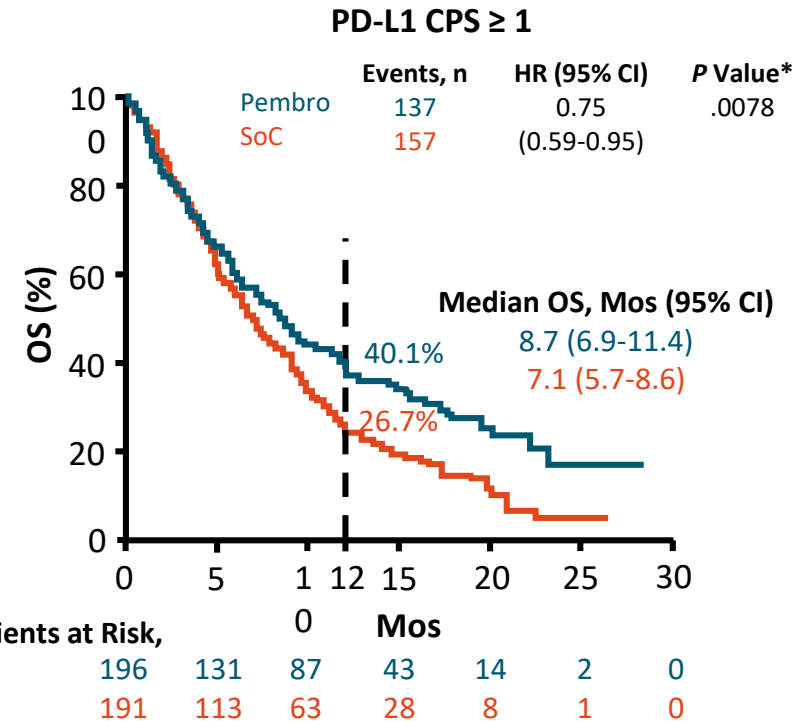


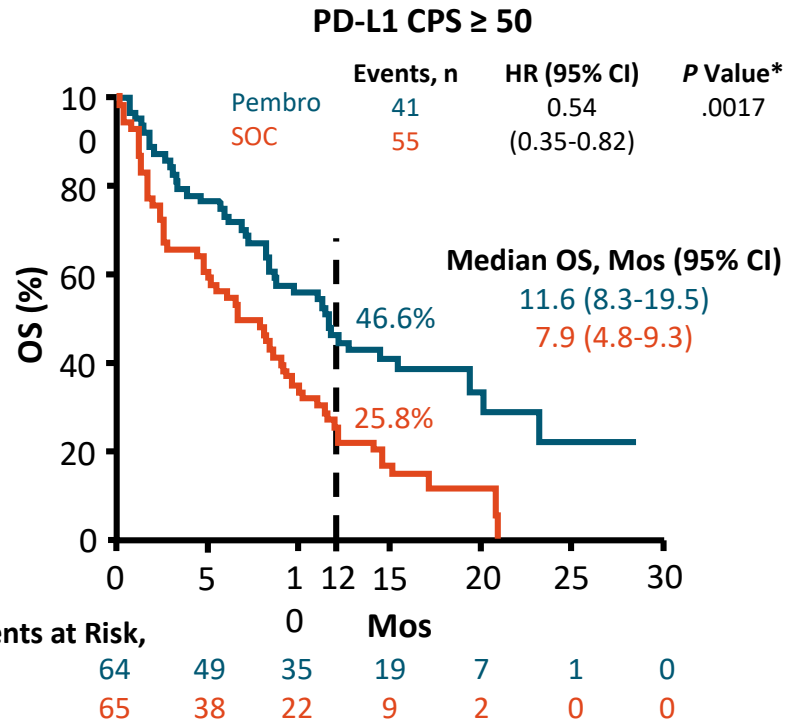
*Investigator's choice of methotrexate 40 mg/m^2/wk (in absence of toxicity could increase to 60 mg/m^2), docetaxel 75 mg/m^2 Q3W, or cetuximab loading dose of 400 mg/m^2 followed by 250 mg/m^2/wk.

- Primary endpoint: OS in ITT population
- Secondary endpoints: OS in PD-L1–positive subgroups, PFS, ORR, DoR, safety, tolerability

Cohen. Lancet. 2019;393:156.

KEYNOTE-040: OS by PD-L1 Expression





*Nominal 1-sided *P* value from log-rank test, stratified by randomization stratification factors.

Cohen. Lancet. 2019;393:156.

Immune Checkpoint Inhibitors in Head and Neck Cancer

Drug	Approved Indication	Target
Nivolumab[1]	Second line in R/M HNSCC with progression on/after platinum-based chemotherapy	PD-1
Pembrolizumab[2]	Second line in R/M HNSCC with progression on/after platinum-containing chemotherapy First line in R/M HNSCC as a single agent in patients with PD-L1–expressing tumors (CPS ≥ 1) and in combination with platinum + 5-FU for all patients	PD-1
Atezolizumab[3]	Not approved in HNSCC	PD-L1
Durvalumab[4]	Not approved in HNSCC	PD-L1
Avelumab[5]	Not approved in HNSCC	PD-L1

1.. Nivolumab PI. 2. Pembrolizumab PI. 3. Atezolizumab PI. 4. Durvalumab PI. 5. Avelumab PI.

2022 ASCO® ANNUAL MEETING

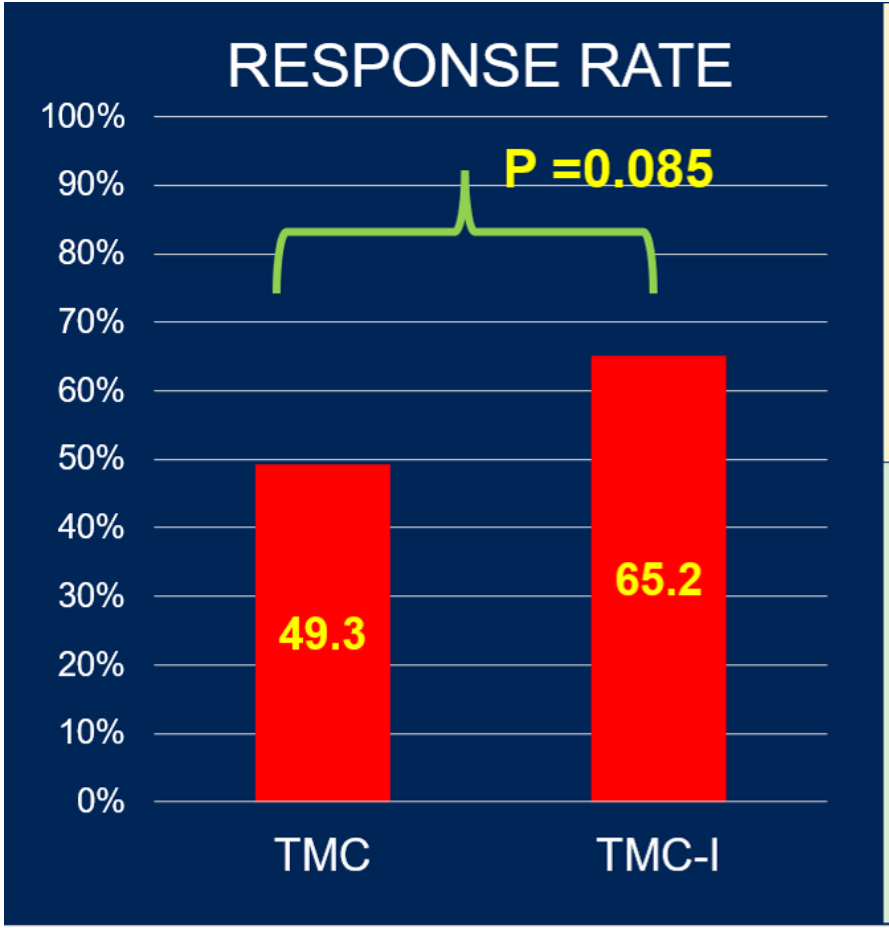
Phase 3 randomized study evaluating the role of low dose nivolumab to palliative chemotherapy in head and neck cancer

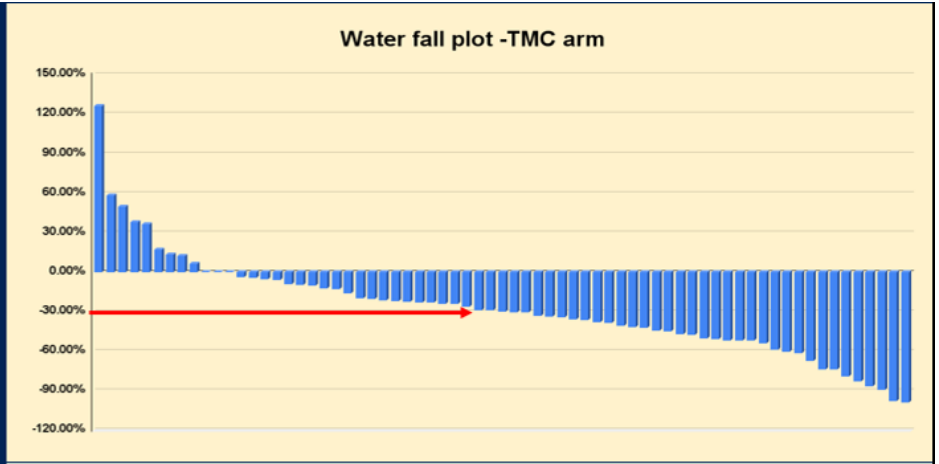
Professor Vijay Maruti Patil

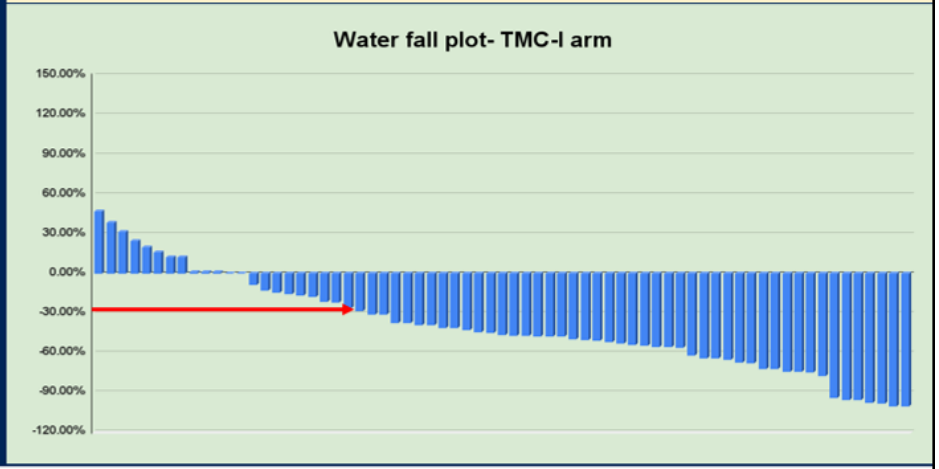
On behalf of Department of Medical Oncology

Head and Neck DMG

Tata Memorial Centre, Mumbai

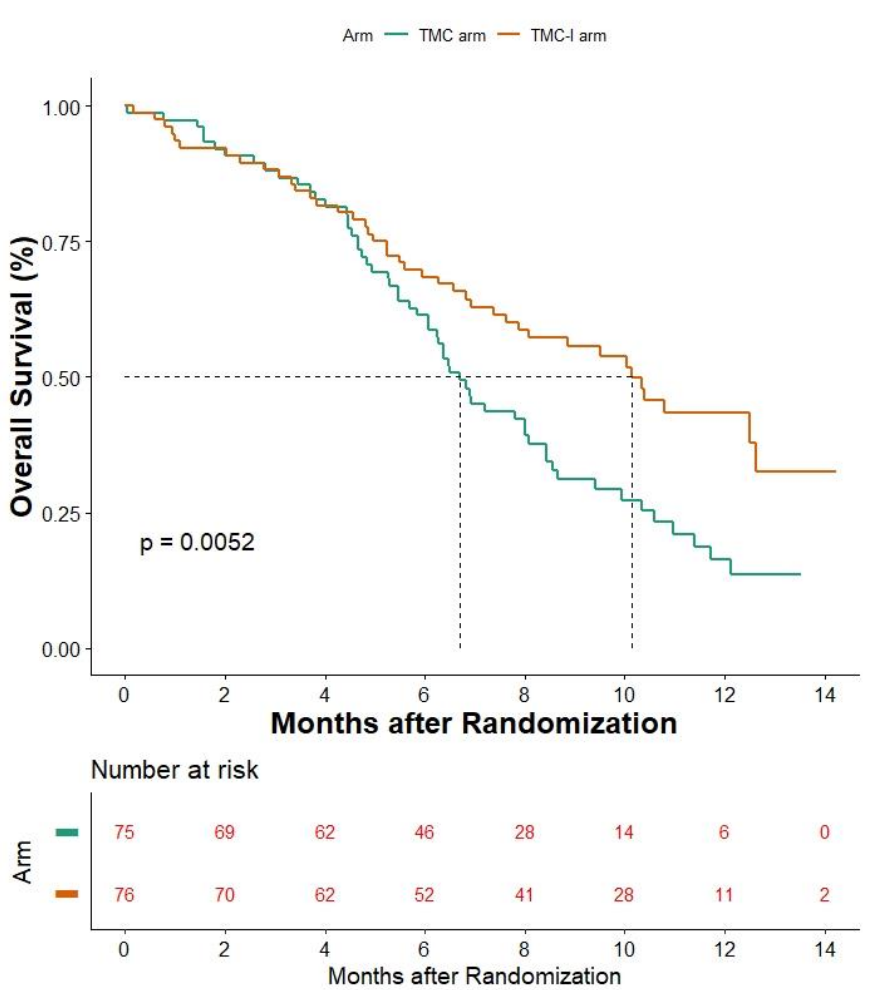






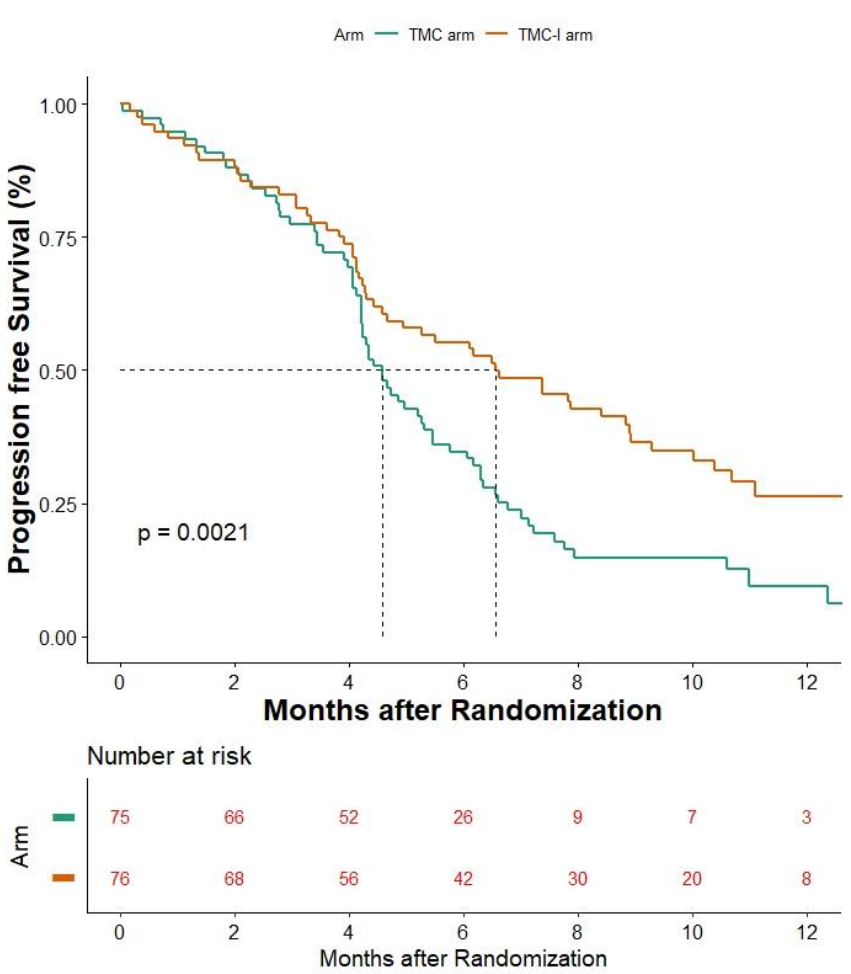
Overall survival

- The median overall survival in TMC and TMC-I arms was 6.7 months (95% CI 5.83 - 8.07) and 10.1 months (95% CI 7.37-12.63) respectively
- Hazard ratio-0.545; 95% CI 0.362-0.82; P=0.00358
- 1 year OS improved from 16.3% to 43.4%

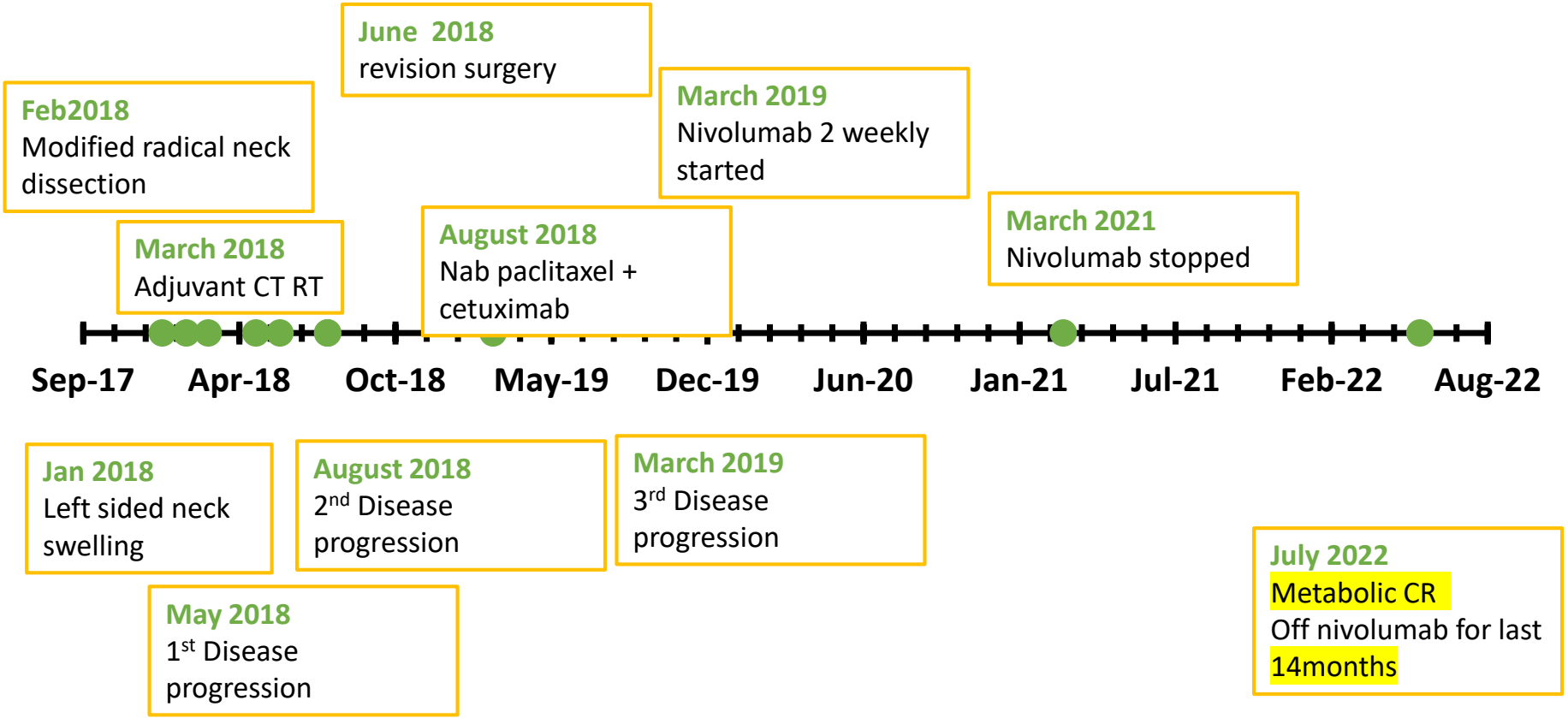


PFS

- The median progression-free survival in the TMC and the TMC-I arms was 4.57 months (95% CI 4.2 -5.3) and 6.57 months (95% CI 4.43-8.9) respectively (P=0.0021)
- Hazard ratio-0.564 (95% CI 0.389-0.816; P=0.0024)
- 1 year PFS improved from 3.24 % (to 27.5%

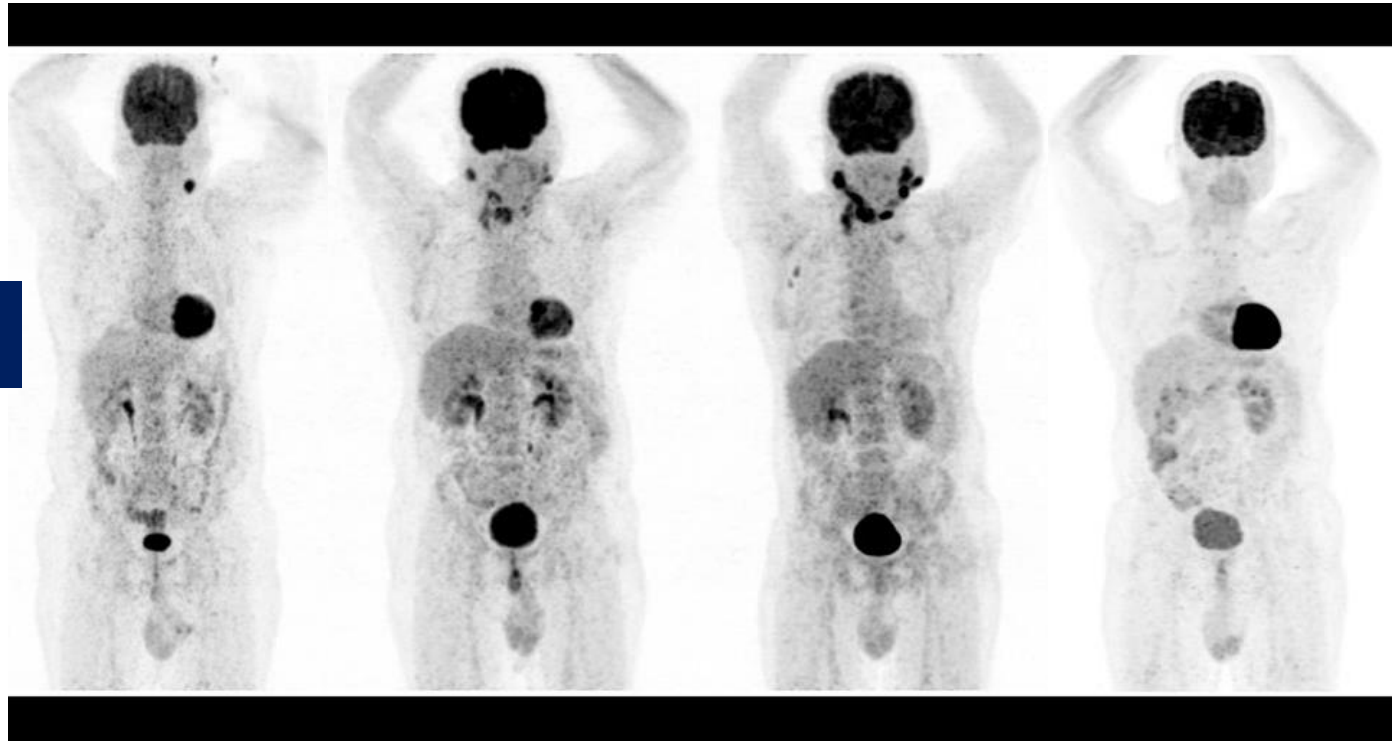


Does IO lead to long term survival



70 M, HNSCC- Journey

72 M, ca buccal Mucosa



At diagnosis

Disease recurrence after Sx and post CT/RT

Disease progression after nab paclitaxel + cetuximab

Post 6 months of nivolumab therapy

What is your choice for CPS 1-19

OS and PFS	PD-L1 CPS < 1		PD-L1 CPS 1-19		PD-L1 CPS ≥ 20	
	Pembrolizumab-Chemotherapy (n = 39)	Cetuximab-Chemotherapy (n = 43)	Pembrolizumab-Chemotherapy (n = 116)	Cetuximab-Chemotherapy (n = 125)	Pembrolizumab-Chemotherapy (n = 126)	Cetuximab-Chemotherapy (n = 110)
Median OS[a] months, (95% CI)[11]	11.3 (9.5 to 14.0)	10.7 (8.5 to 15.9)	12.7 (9.4 to 15.3)	9.9 (8.6 to 11.5)	14.7 (10.3 to 19.3)	11.0 (9.2 to 13.0)
OS HR[b] (95% CI)	1.21 (0.76 to 1.94)		0.71 (0.54 to 0.94)		0.60 (0.45 to 0.82)	
P[c]	.78932		.00726		.00044	
12-month OS rate[a] %, (95% CI)[11]	41.0 (25.7 to 55.8)	46.5 (31.2 to 60.4)	52.6 (43.1 to 61.2)	41.1 (32.4 to 49.6)	57.1 (48.0 to 65.2)	46.1 (36.6 to 55.1)
Median PFS[a,d] months, (95% CI)	4.7 (3.4 to 6.2)	6.2 (5.0 to 7.3)	4.9 (4.2 to 5.3)	4.9 (3.7 to 6.0)	5.8 (4.7 to 7.6)	5.3 (4.9 to 6.3)
PFS HR[b] (95% CI)	1.46 (0.93 to 2.30)		0.93 (0.71 to 1.21)		0.76 (0.58 to 1.01)	
P[c]	.94898		.29189		.02951	

ESMO GOOD SCIENCE BETTER MEDICINE BEST PRACTICE

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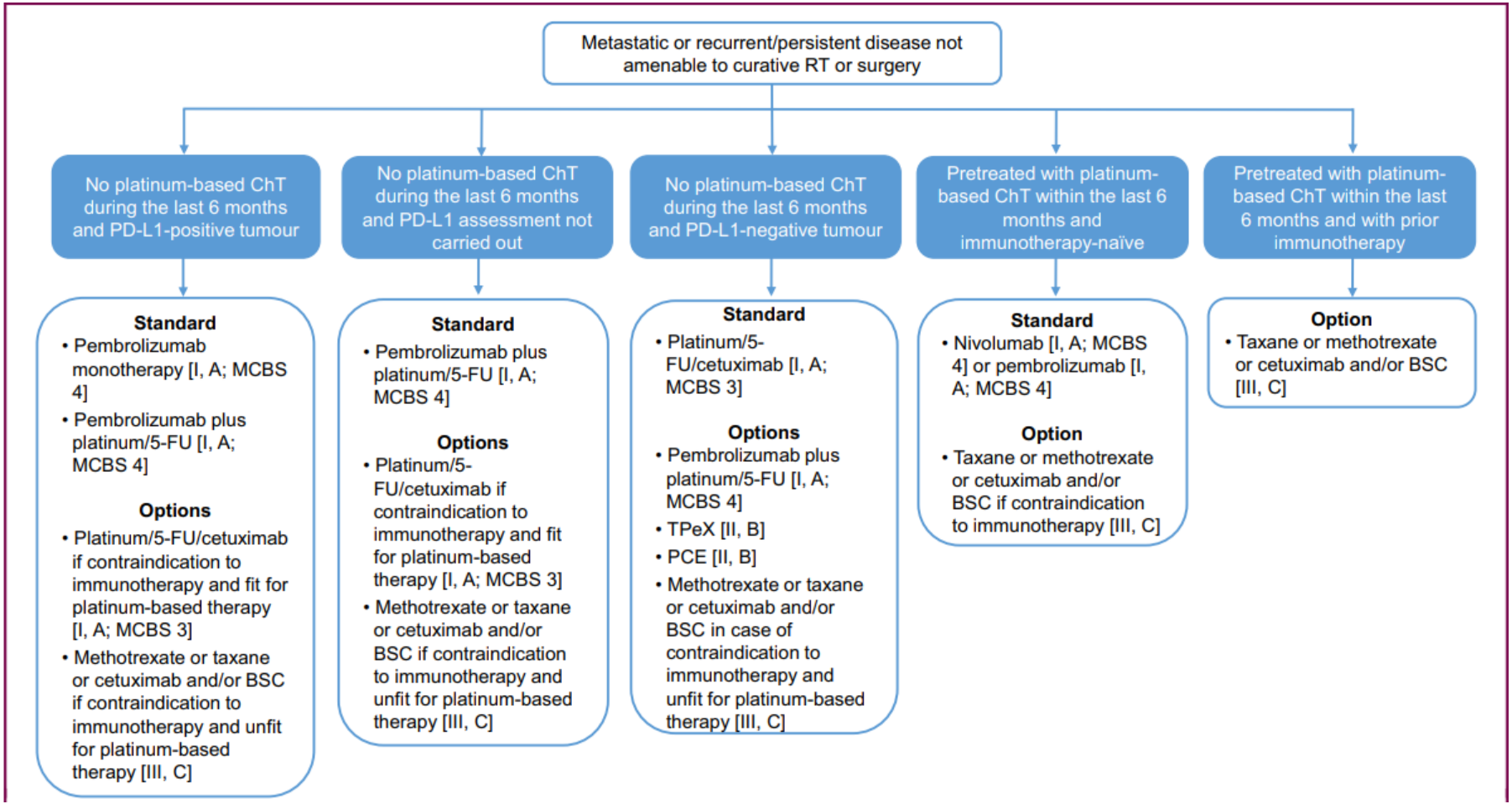
SPECIAL ARTICLE

Pan-Asian adaptation of the EHNS—ESMO—ESTRO Clinical Practice Guidelines for the diagnosis, treatment and follow-up of patients with squamous cell carcinoma of the head and neck

B. Keam[1*], J.-P. Machiels[2], H. R. Kim[3], L. Licitra[4], W. Golusinski[5], V. Gregoire[6], Y. G. Lee[7], C. Belka[8], Y. Guo[9], S. J. Rajappa[10], M. Tahara[11], M. Azrif[12], M. K. Ang[13], M.-H. Yang[14], C.-H. Wang[15], Q. S. Ng[16], W. I. Wan Zamaniah[17], N. Kiyota[18], S. Babu[19], K. Yang[20], G. Curigliano[21,22], S. Peters[23], T. W. Kim[24], T. Yoshino[25] & G. Pentheroudakis[26]

3s. Pembrolizumab in combination with platinum/5-FU and pembrolizumab monotherapy are two approved regimens for patients with R/M SCCHN expressing PD-L1 (CPS ≥1) [I, A; ESMO-MCBS v1.1 score: 4]. **The choice of pembrolizumab monotherapy or chemotherapy plus pembrolizumab may be based on CPS, tumour burden and symptoms [V, C].**	100
3t. Platinum/5-FU/cetuximab remains the standard therapy for patients with R/M SCCHN not expressing PD-L1 [I, A; ESMO-MCBS v1.1 score: 3]. **Pembrolizumab plus chemotherapy [II, C], TPeX [II, B] and PCE [II, B] are also treatment options in this population.**	100
3u. Nivolumab is both FDA- and EMA-approved for recurrent/metastatic patients who progress within 6 months of platinum therapy [I, A; ESMO-MCBS v1.1 score: 4].	100


Metastatic or recurrent/persistent disease not amenable to curative RT or surgery
No platinum-based ChT during the last 6 months and PD-L1-positive tumour
No platinum-based ChT during the last 6 months and PD-L1 assessment not carried out
No platinum-based ChT during the last 6 months and PD-L1-negative tumour
Pretreated with platinum-based ChT within the last 6 months and immunotherapy-naïve
Pretreated with platinum-based ChT within the last 6 months and with prior immunotherapy
Standard
• Pembrolizumab monotherapy [I, A; MCBS 4]
• Pembrolizumab plus platinum/5-FU [I, A; MCBS 4]
Options
• Platinum/5-FU/cetuximab if contraindication to immunotherapy and fit for platinum-based therapy [I, A; MCBS 3]
• Methotrexate or taxane or cetuximab and/or BSC if contraindication to immunotherapy and unfit for platinum-based therapy [III, C]
Standard
• Pembrolizumab plus platinum/5-FU [I, A; MCBS 4]
Options
• Platinum/5-FU/cetuximab if contraindication to immunotherapy and fit for platinum-based therapy [I, A; MCBS 3]
• Methotrexate or taxane or cetuximab and/or BSC if contraindication to immunotherapy and unfit for platinum-based therapy [III, C]
Standard
• Platinum/5-FU/cetuximab [I, A; MCBS 3]
Options
• Pembrolizumab plus platinum/5-FU [I, A; MCBS 4]
• TPeX [II, B]
• PCE [II, B]
• Methotrexate or taxane or cetuximab and/or BSC in case of contraindication to immunotherapy and unfit for platinum-based therapy [III, C]
Standard
• Nivolumab [I, A; MCBS 4] or pembrolizumab [I, A; MCBS 4]
Option
• Taxane or methotrexate or cetuximab and/or BSC if contraindication to immunotherapy [III, C]
Option
• Taxane or methotrexate or cetuximab and/or BSC [III, C]

Biomarkers and Targeted Drugs in Head and Neck Cancer

Biomarker	Drug	Head and Neck Cancer
PD-L1	Pembrolizumab	First line in R/M HNSCC as monotherapy (CPS ≥ 1) and in combination with chemotherapy
PD-L1	Nivolumab, pembrolizumab	Monotherapy in R/M HNSCC with progression on/after platinum-based chemotherapy
MSI-H	Pembrolizumab	Monotherapy in R/M HNSCC with progression on/after prior treatment
TMB-H	Pembrolizumab	Monotherapy in head and neck cancers with progression on/after prior treatment
AR +	Leuprolide*, bicalutamide*	Salivary gland tumors
NTRK gene fusion	Larotrectinib, entrectinib	Salivary gland tumors
HER2+	Trastuzumab ± pertuzumab or docetaxel*, TDM-1*	Salivary gland tumors

Guideline-recommended off-label use under certain circumstances.

Pembrolizumab PI. Nivolumab PI. NCCN Clinical Practice Guidelines in Oncology (NCCN Guidelines®): Head and Neck Cancers. Version 1.2021. 11/08/2020. Available at: www.NCCN.org. Accessed March 8, 2021.

Biomarkers of Response to Immunotherapy in HNSCC

- PD-L1
- Viral etiology
- Tumor mutational burden
- Immune gene expression
- Hypoxia

Slide credit: clinicaloptions.com

GATS 2 | Global Adult Tobacco Survey

FACT SHEET | INDIA 2016-17

GATS Objectives

The Global Adult Tobacco Survey (GATS) is a global standard for systematically monitoring adult tobacco use (smoking and smokeless) and tracking key tobacco control indicators.

GATS is a nationally representative survey, using a consistent and standard protocol across countries including India. GATS enhances countries' capacity to design, implement and evaluate tobacco control programs. It will also assist countries to fulfill their obligations under the World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) to generate comparable data within and across countries. WHO has developed MPOWER, a package of selected demand reduction measures contained in the WHO FCTC that includes:

mpower

- Monitor tobacco use & prevention policies
- Protect people from tobacco smoke
- Offer help to quit tobacco use
- Warn about the dangers of tobacco
- Enforce bans on tobacco advertising, promotion, & sponsorship
- Raise taxes on tobacco

GATS Methodology

GATS uses a global standardized methodology. It includes information on respondents' background characteristics, tobacco use (smoking and smokeless), cessation, secondhand smoke, economics, media, and knowledge, attitudes and perceptions towards tobacco use. GATS is a household survey of persons 15 years of age or older

GATS 2 Highlights

TOBACCO USE

- 19.0% of men, 2.0% of women and 10.7% (99.5 million) of all adults currently smoke tobacco.
- 29.6% of men, 12.8% of women and 21.4% (199.4 million) of all adults currently use smokeless tobacco.
- 42.4% of men, 14.2% of women and 28.6% (266.8 million) of all adults currently use tobacco (smoked and/or smokeless tobacco).

CESSATION

- 55.4% of current smokers are planning or thinking of quitting smoking and 49.6% of current smokeless tobacco users are planning or thinking of quitting smokeless tobacco use.
- 48.8% of current smokers were advised by health care provider to quit smoking and 31.7% of current smokeless tobacco users were advised by health care provider to quit use of smokeless tobacco.

SECONDHAND SMOKE

- 38.7% of adults were exposed to second hand smoke at home.
- 30.2% of adults who work indoors are exposed to second-hand smoke at their workplace.
- 7.4% of adults were exposed to second hand smoke at restaurants.

Prevalence of current tobacco use (smoking and/or smokeless) among states/UTs, GATS India 2016-17

TOBACCO

- Global Adult Tobacco Survey 2 , 2018 –every third adult in rural areas and every fifth adult in urban areas uses tobacco
- First hand, second hand and third hand smoke inhalation

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Under the aegis of the

MGUMST

4th Annual Congress of
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IOSICON

20th to 22nd January 2023 JAIPUR

Organizing Chairman
Dr. Hemant Malhotra

Organizing Secretary
Dr. Jyoti Bajpai

Organizing Secretary
Dr. Lalit Mohan Sharma

Joint Organizing Secretary
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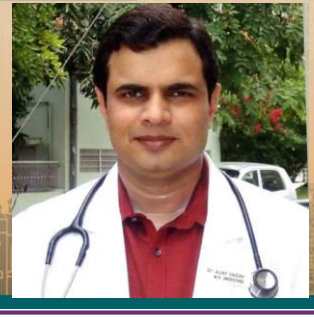

Thank you