

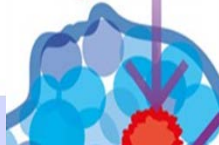
Treatment of Head and Neck cancers with modulated radiation at an Indian Centre

**Tejinder Kataria, Deepak Gupta, Trinanjan Basu, Shikha Goyal, Kushal
Narang, Ashu Abhishek, Shyam Bisht, Karrthick KP.**

*Medanta Cancer Institute, Division Of Radiation
Oncology, Medanta the Medicity, Gurgaon*

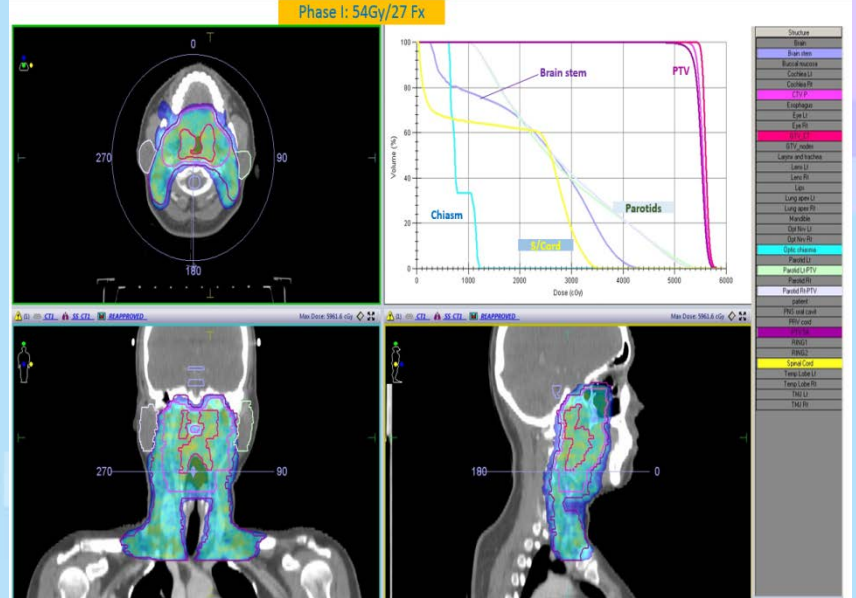
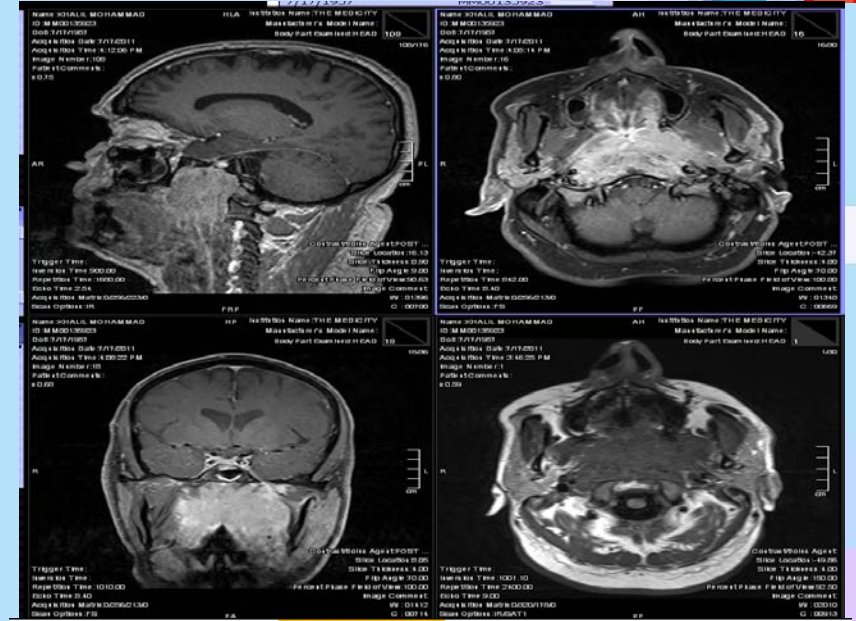
H & N Cancers-5.1% of all cancers in India and 15 % of cancers amongst Males

- **1030 head and neck (HNC) cancer patients were treated (March 2010-Sept-2016) and we present analysis of 517/608 patients with at least 2 years of follow up post treatment (between March 2010 to Dec 2014).**
- **Electronic health information system and Mosaic were used for data retrieval**
- **Informed consent, dental prophylaxis, diet counseling, audiometry,**
- **Immobilization, orfit cast, simulation on 64 slice helical CT @3 mm thickness, import of images to Focal SIM; structure delineation and dose prescription, export to CMS MONACO v.3.0 (Elekta Stockholm, Sweden)**
- **Planning with IMRT/VMAT ; plan verification after cross sectional and DVH analysis, plan authorization and export of the structure sets and dose profile through MOSAIQ to LINAC, scheduling of the patient for treatment and XVI generation .**



Materials and methods

- 517/608 records of HNC patients between March 2010 to Dec 2014.
- Modulated radiotherapy (IMRT or VMAT) with or without concurrent chemotherapy.
- Demographic parameters and disease related factors were analysed.
- Disease free survival (DFS) and Overall survival (OS) was calculated.
- The statistical analysis were performed using SPSS version 20.0 and Kaplan Meir method was used for survival.



Results

<u>Patient characteristics</u>	<u>Number</u>	<u>Percentage (%)</u>
Age (years)	60 Median (Range 16-93)	
SEX:- Male: Female	513:95	84.3:15.6
HISTOLOGY		
Squamous Cell Carcinoma	568	93.4
Undifferentiated carcinoma	40	6.6
CO-MORBIDITIES		
Diabetes	40	6.5
Hypertension	50	8.2
Hypothyroidism	5	0.8
Coronary artery disease	7	1.1
ADDICTION		
Tobacco chewing	304	50
Tobacco smoking	200	32.8
Alcohol	125	20.5
RADIOTHERAPY INTENT		
Radical	386	63.5
Post operative	222	36.5
CONCURRENT CHEMOTHERAPY		
Yes	362	59.5
No	246	40.4

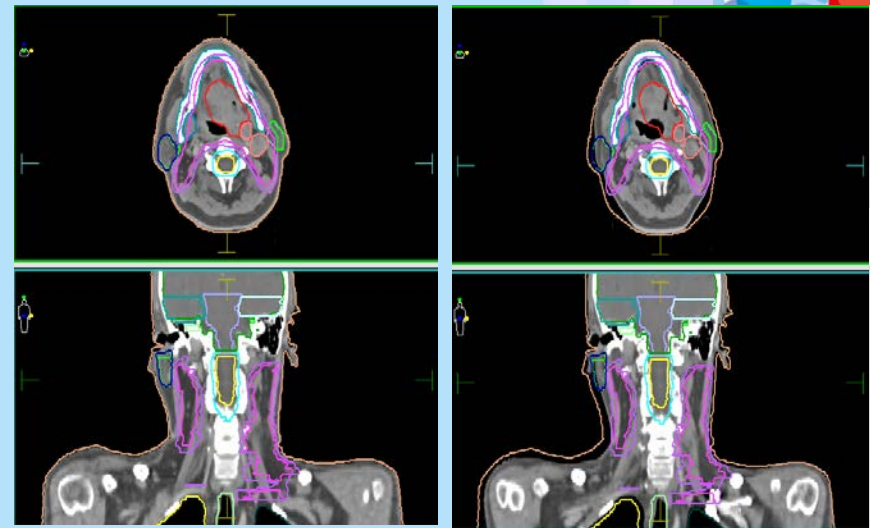
Results

Sub-site	Number (%)	Stage I	Stage II	Stage III	Stage IV
Oral cavity (OC)	224 (36.8)	17(7.5)	36(16)	52(23.2)	119(53.3)
Oropharynx (Opx)	161 (23.7)	0(0)	23(14.4)	49(30.4)	89(55.2)
Nasopharynx (Npx)	41 (6.61)	3(7.2)	1(2.4)	9(21.6)	28(67.2)
Hypopharynx(Hpx)	62 (10.3)	0(0)	5(8)	19(30)	38(62)
Larynx(Lax)	120(19.7)	35(28)	24(20)	34(29)	27(23)

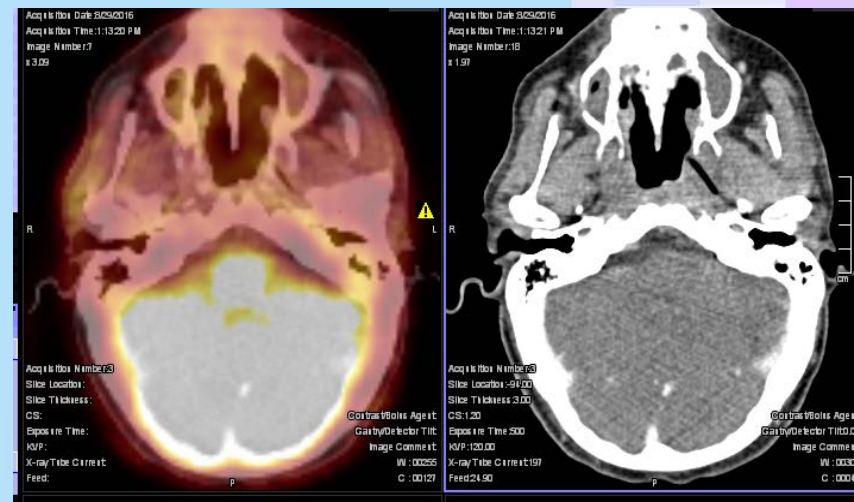


Results

- **Available for Follow up- 517/608**
- Status at last follow up :
- Alive : 348/517 (67.3%)
- Dead: 169/517 (32.69%)
- Recurrence: 120/488(24.6%)
- **Recurrence type:**
 - Loco-regional: 62 /120 (51.67%)
 - Nodal : 25/120 (20.8%)
 - Distant : 33/120 (27.5%)



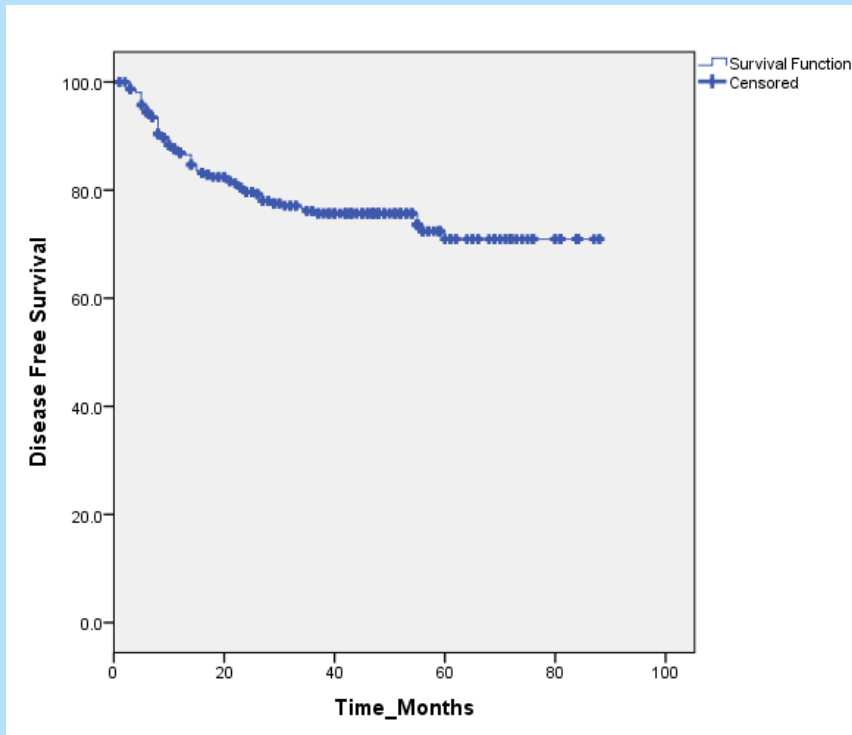
After 44Gy/22 # Shrinking of Tumor, Parotids and subcutaneous fat



Treated in 2013-PET-CECT August 2016: NED

Results

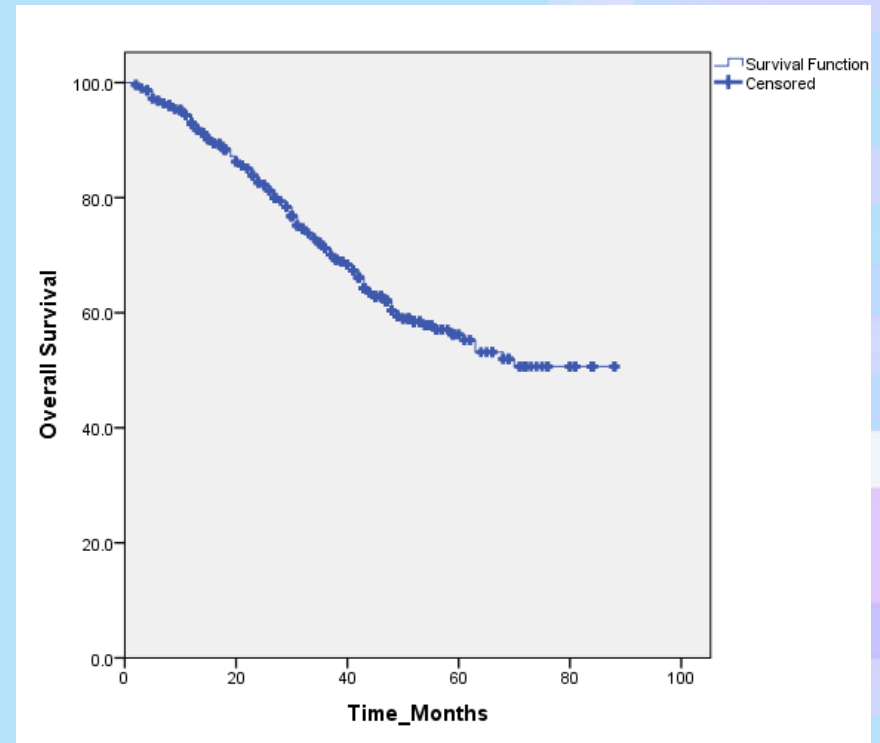
Disease Free Survival



2 years:79%.

5 years:70%.

Overall Survival

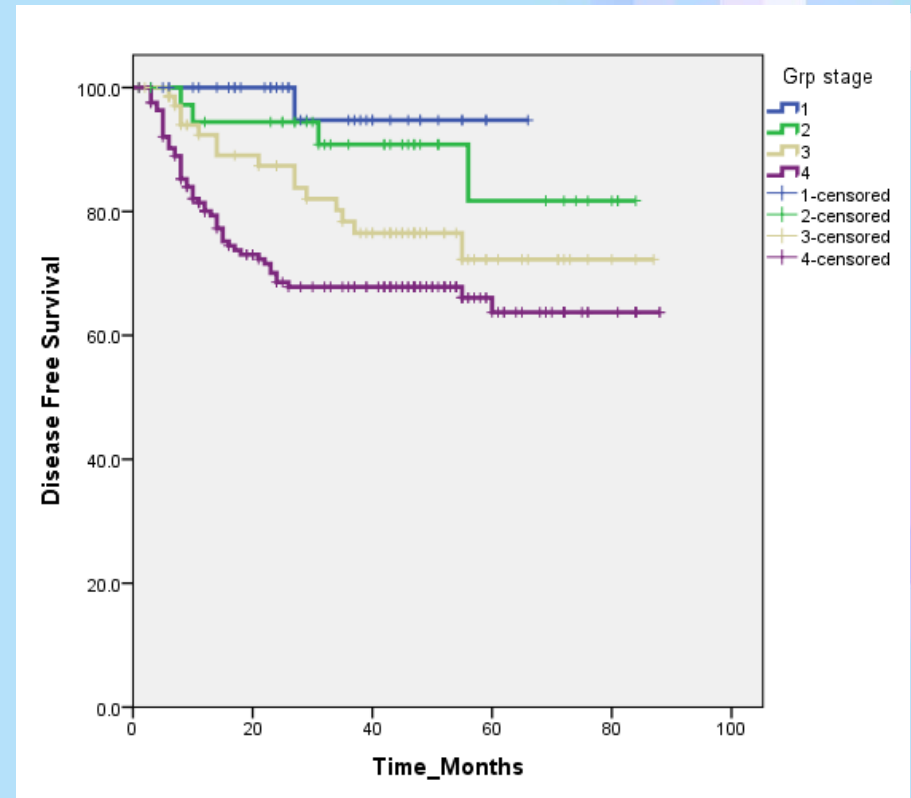


2 years: 82%.

5 years: 58%.

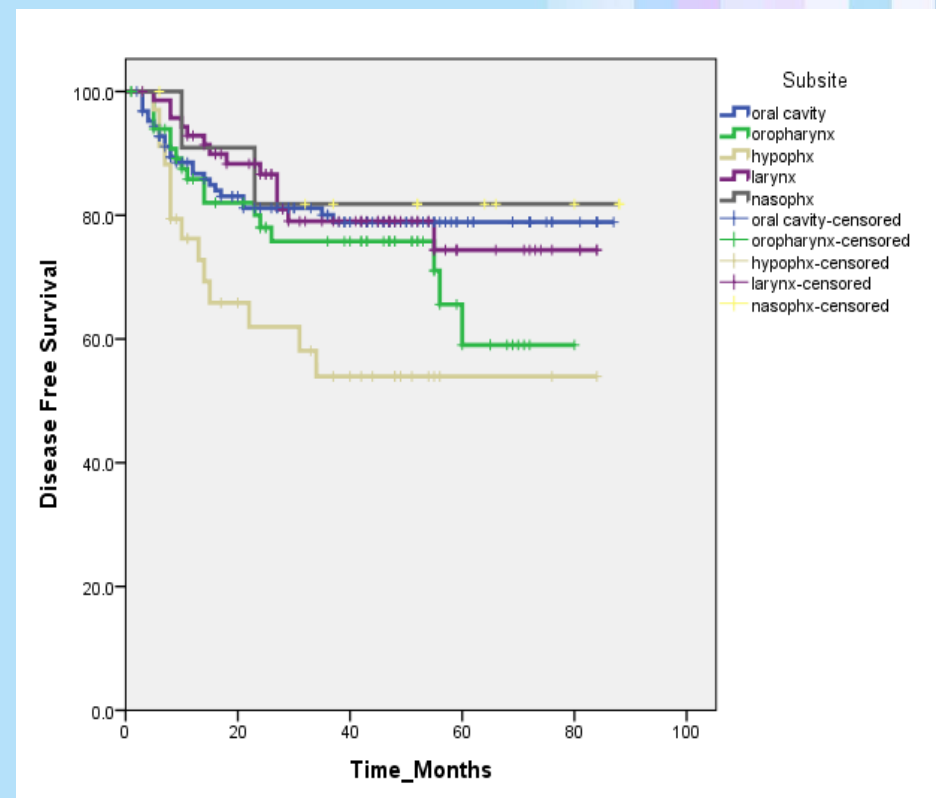
Disease Free Survival

Stage	2 years	5 years
Stage I	100%	95%
Stage II	95%	94%
Stage III	88%	74%
Stage IV	65%	62%



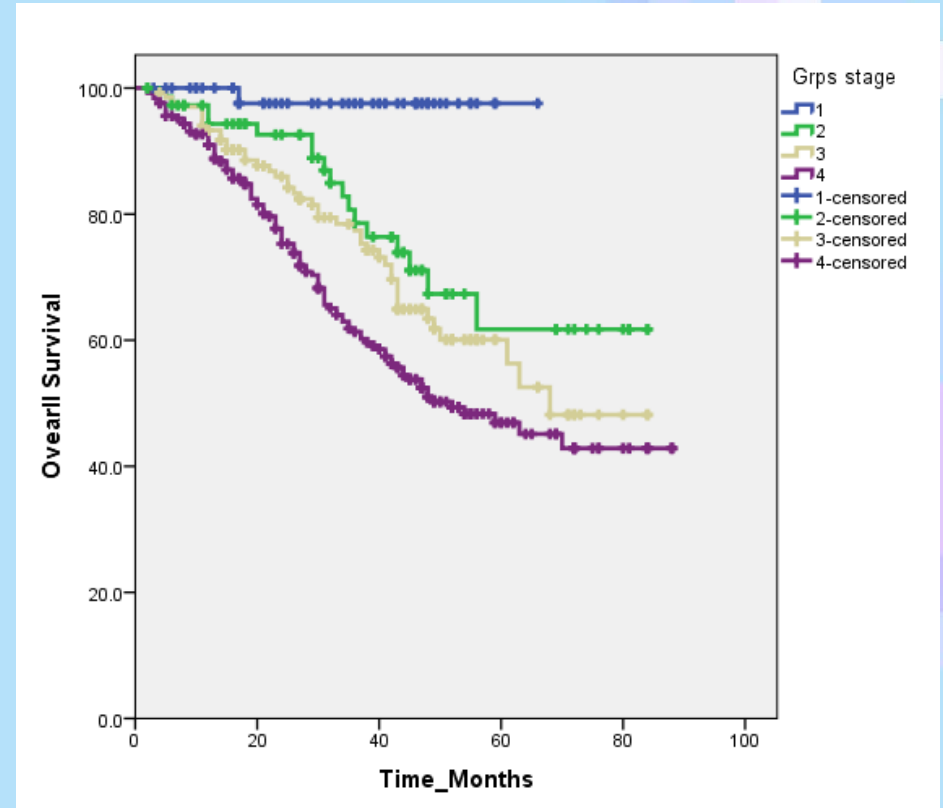
Disease Free Survival

Subsite	2 years	5 years
Oral cavity	81%	79%
Oropharynx	78%	59%
Nasopharynx	82%	82%
Larynx	86%	77%
Hypopharynx	62%	56%



Overall Survival

<u>Stage</u>	<u>2 years</u>	<u>5 years</u>
Stage I	97%	97%
Stage II	91%	62%
Stage III	83%	60%
Stage IV	73%	48%

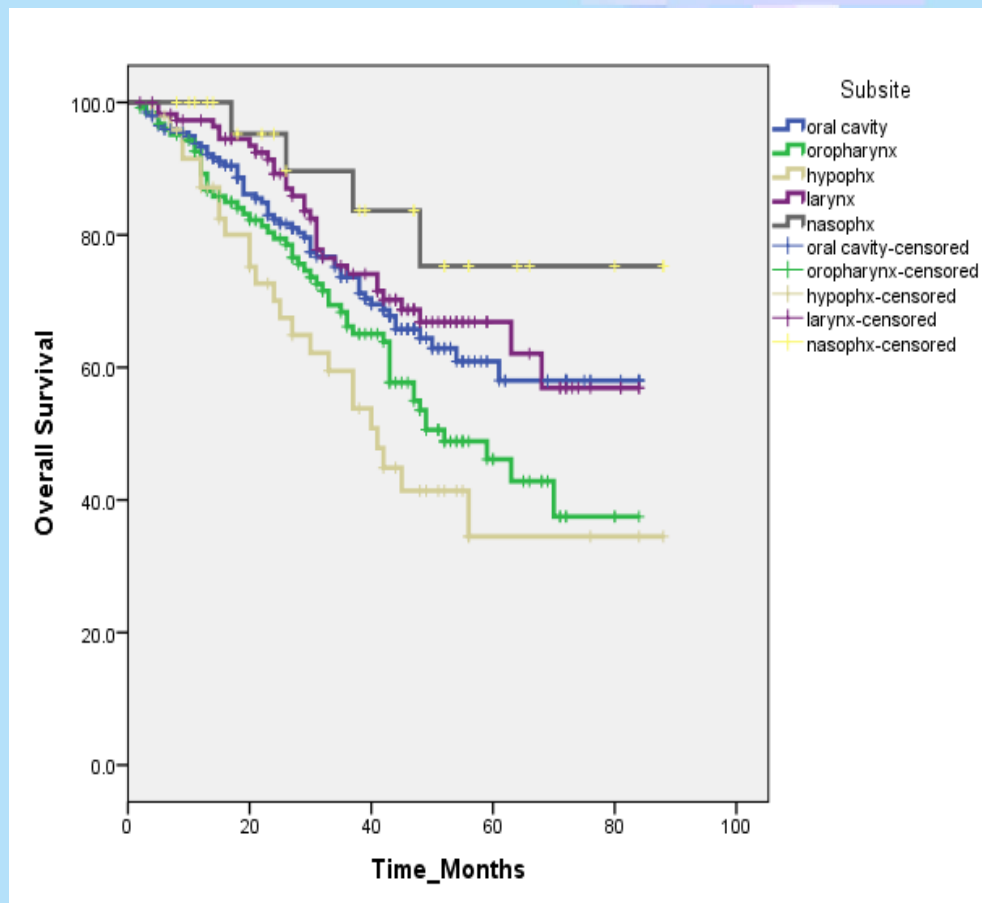




Results

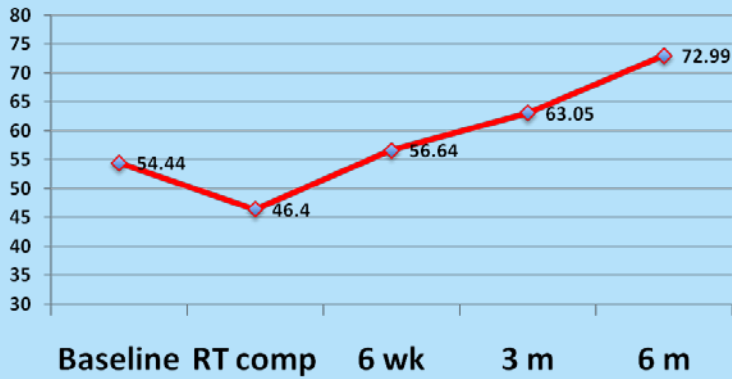
Overall Survival

<u>SUBSITE</u>	<u>2 years</u>	<u>5 years</u>
Oral cavity	81%	61%
Oropharynx	80%	50%
Nasopharynx	96%	76%
Larynx	88%	68%
Hypopharynx	68%	35%

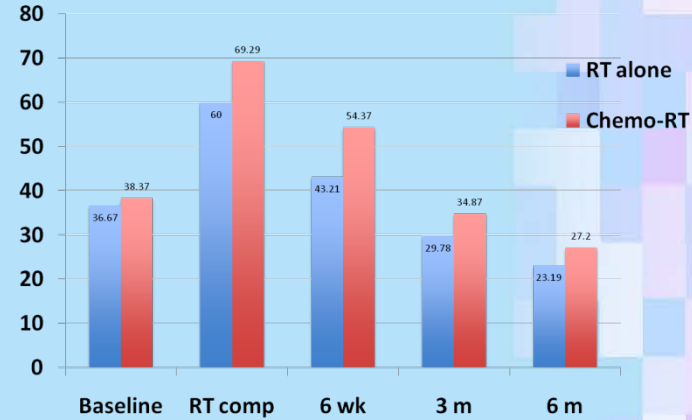


Prospective evaluation of Quality of life in patients receiving high precision radiotherapy for head & neck cancers

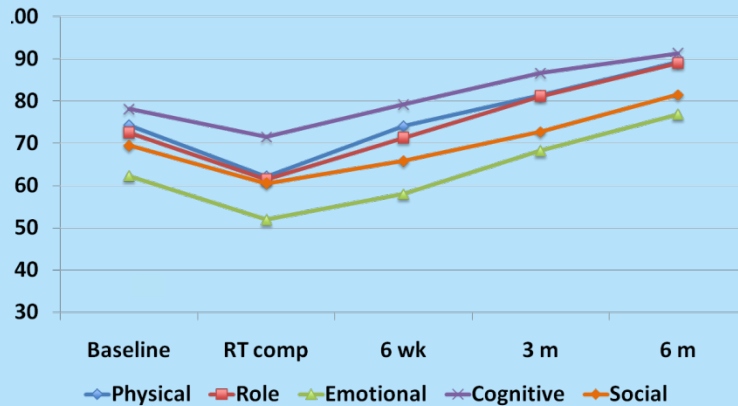
EORTC-QLQ C30 - Global health score



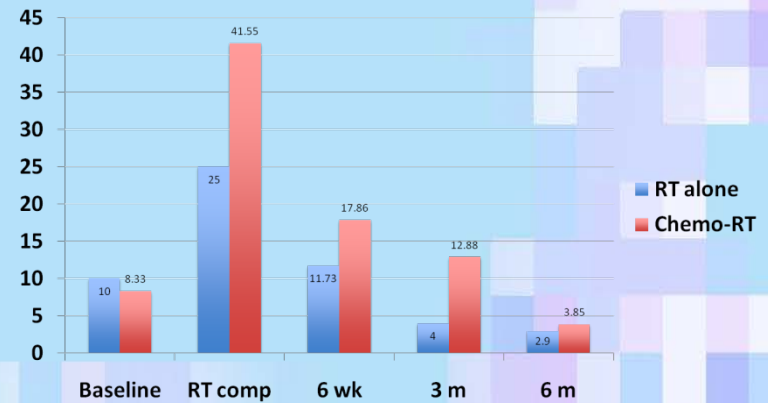
Fatigue



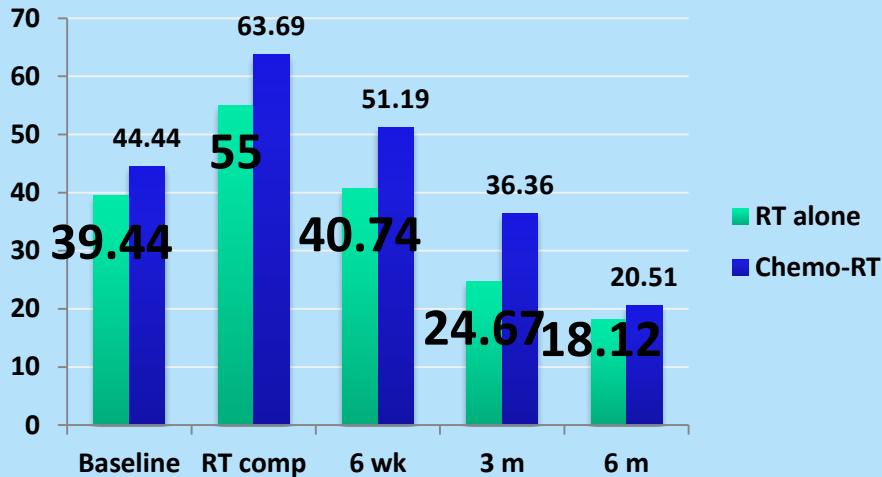
EORTC QLQ-C30 Functioning scores



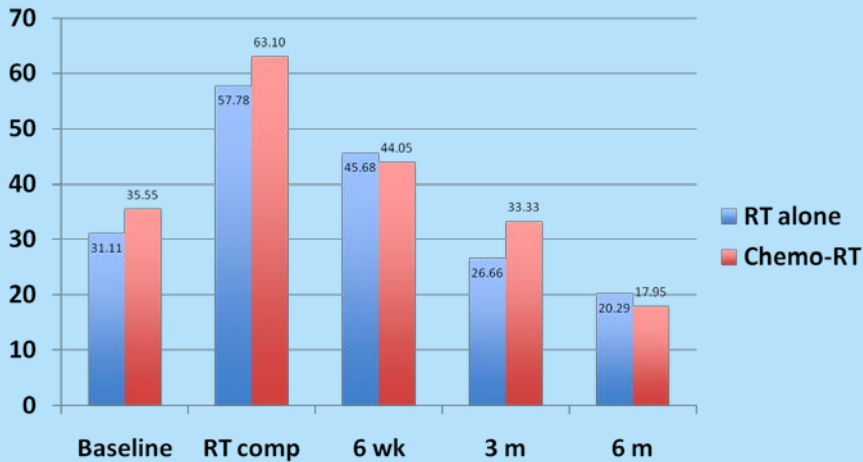
Nausea vomiting



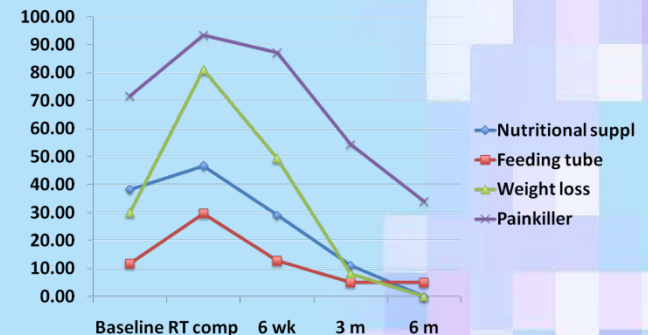
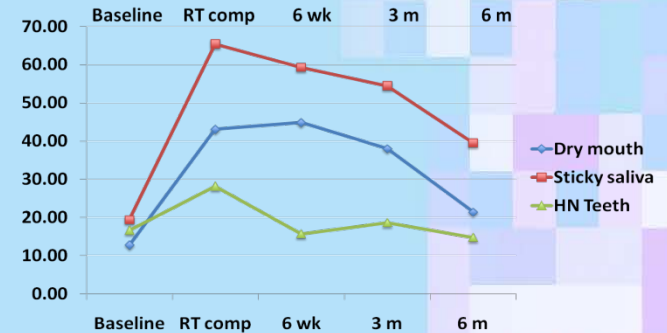
Pain



Appetite loss



EORTC-HN35 Symptom scores



Conclusion:- QOL assessment in patients receiving precision RT helps in identifying problems that need additional supportive measures and thus improve quality of care.

Conclusions

- The single center large cohort of HNC patient's data re-validates need and benefit of Radiation both in post-operative and radical setting.
- Future stringent follow-up and quality of life issues need to be considered in a prospective manner.

Thank you for your attention.