
Quality of Life in the Era of Chemoradiation

Jolie Ringash MD, MSc, FRCP(C)

Radiation Oncologist



Princess Margaret Hospital

Background: H&N Cancer

- 2% of all cancers
- 3100 incident cases in Canada (2004)
- Associated with smoking, alcohol
- M:F ratio of 2:1
- Frequently present with locoregional disease
- Usually curable with radiation or surgery

Strategies to Improve H&N Cancer Cure

- Stage III/IV disease (node positive) may have cure rates of only 40-50%
- Concurrent chemotherapy increases cure by about 10%
- Accelerated radiotherapy increases local control
- All strategies increase toxicity

QOL Issues in H&N Cancer



What is QOL?

- “Optimum levels of physical, role and social function, including relationships, and the perception of health, fitness, life satisfaction and well-being. It should also include some assessment of the patient’s level of satisfaction with treatment, outcome and health status and with future prospects.” - Bowling, 1995



Instruments

- Reliable, valid, responsive to change
- FACT-H&N
- EORTC QLQ-C30, H&N35
- McMaster HNRQ
- UWQOL

Ringash J, Bezjak A: A structured review of quality of life instruments for head and neck cancer patients. *Head & Neck* 23; 201-213, 2001

Medline 1950-present

- Quality of life, “head and neck neoplasms”, radiotherapy, drug therapy
- NOT “esophageal neoplasms”
- Limit to: English, human, Clinical trials
- 11 hits
- Actual reports of prospective QOL assessment: 8 papers, 4 trials & 1 cohort
- (3 papers all on the same trial)



Other studies identified:

- Manual reference review, etc.
- 3 additional studies
- Total: 8 trials/cohorts published with prospective QOL data for chemoRT



| Author | Year | N | Tx | Tool | Timing |
|-----------------|------|------|----------------------|--------------------------|---------------------------|
| McDonough | 1996 | 24 | CT-RT; CT-surg-RT | UW-QOL | BL,OT, 1mo |
| List/Vokes/Kies | 1999 | 76 | CRTbid | FACT-H&N, HNRQ | BL,OT, 3mo..4yr |
| Airoldi | 2004 | 40 | Surg-CRT | FACT-H&N | Post-op, OR, 2mo.. 1yr |
| Abdul-Wahab | 2005 | 27 | CRTbid | FACT-H&N | BL,OT, 2mo..1yr |
| Cohen | 2006 | 53 | CRTbid | FACT-H&N, HNRQ | BL, 3 mo..5 yr |
| Goguen | 2006 | 59 | CT-CRT | FACT-H&N | BL,OT, 6,9 mo |
| Curran | 2007 | 211* | cetuxRT | EORTC QLQ C-30 & HN35 | BL,OT,4 mo..1yr |
| Langendijk | 2008 | 61* | CRT | EORTC QLQ C-30 | 6,12,18,24 mo |



Ph III Treatment Trial

- 425 patients, locoregionally advanced HNC
- Randomized to RT vs RT/cetuximab
- Primary Outcome: Median LRC 24.4 vs 14.9 mo
- Median OS 49 vs 29.3 mo, 3 yr 55 vs 45%
- Gr 3 toxicity: no difference (except rash 8% & infusion reactions 1%)

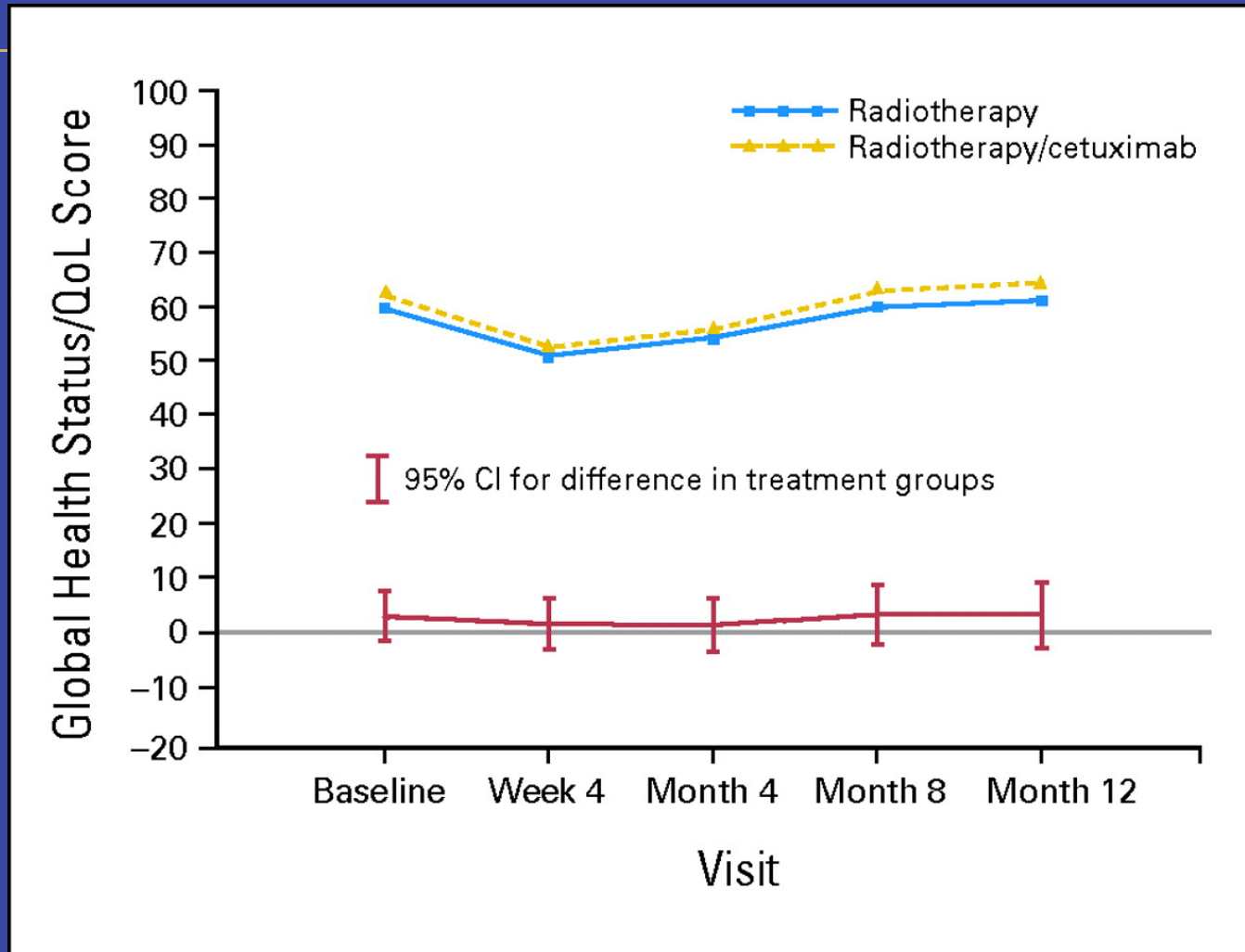


QOL Results

- EORTC QLQ-C30 & HN35
- Baseline, 4 wk, 4, 8, 12 mo
- Compliance: 80-90% to 4mo, 65% 1 yr
- More drop outs in RT alone arm, with poor baseline KPS or low baseline global QOL
- QOL worsened over time but returned to baseline by 12 mo



Fig 1. Least squares means estimate of the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire C30 global health status/quality of life (QoL) scores as functions of treatment group and difference between treatment groups (95% CIs) at each time point



Curran, D. et al. J Clin Oncol; 25:2191-2197 2007

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Conventional vs. Accelerated vs Chemo/RT

| | Baseline | On tx | 6 mo | 12 mo |
|-----------------------|----------|-------|------|-------|
| Pilocarpine N= 130 | 81% | 57% | 83% | --- |
| Hardwins N= 173 | 72% | --- | 76% | 80% |
| Vokes N= 76 | 60% | 55% | --- | 59% |

Vokes et al, JCO 2000; 18:1652-1661

Quality of Life in Patients with Nasopharyngeal Carcinoma after Intensity-modulated Radiation

Therapy

- In 2003-2005, a prospective phase II study of IMRT for NPC was conducted at Princess Margaret Hospital
- 45 patients with T1-4 N0-3 M0 NPC
- IMRT +/- chemotherapy
- IMRT: 70 Gy/35#/60 Gy/30#/54 Gy/30#
- Cisplatin chemotherapy
 - Concurrent: weeks 1, 4, 7
 - Adjuvant: weeks 11, 15, 19



Methods: QOL assessment

- 2 questionnaires
 - Functional Assessment of Cancer Therapy Head and Neck Questionnaire (FACT-H&N)
 - University of Washington Quality of Life Questionnaire (UW-QOL)
- 6 time points
 - Baseline
 - During RT
 - 2, 4, 6 and 12 months post-RT
- Non-English speaking patients only complete FACT-H&N (translated version)
- Change in score of 10% of the instrument range considered clinically significant

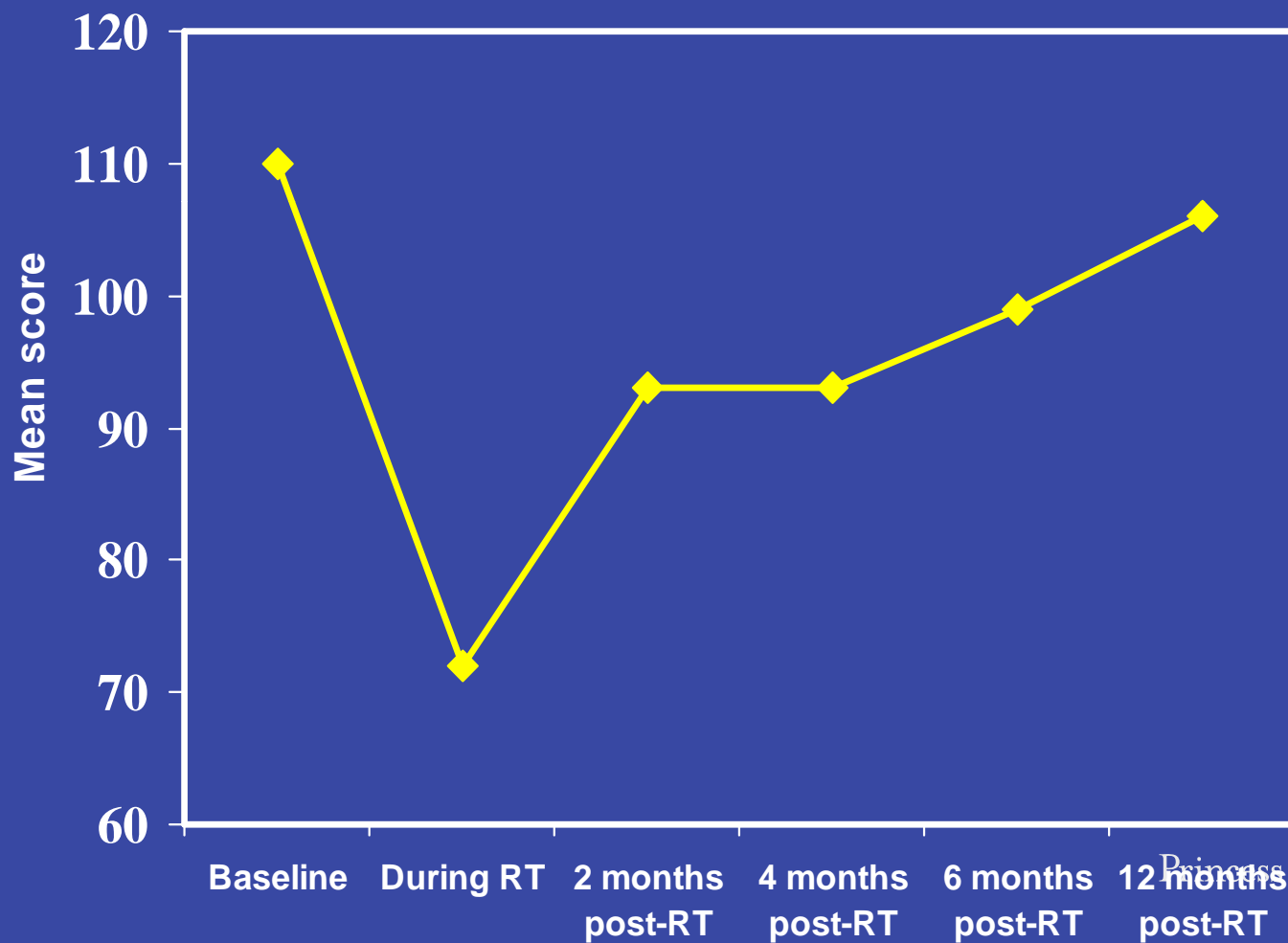


Results—demographics

| | |
|----------------------|----------|
| Age (years) | |
| • Mean | 48 |
| • Range | 26-74 |
| Sex | |
| • Male | 32 (71%) |
| • Female | 13 (29%) |
| Stage | |
| • I/II | 14 (31%) |
| • III/IVB | 31 (69%) |
| Treatment | |
| • Radiotherapy alone | 10 (22%) |
| • Chemotherapy | 35 (78%) |



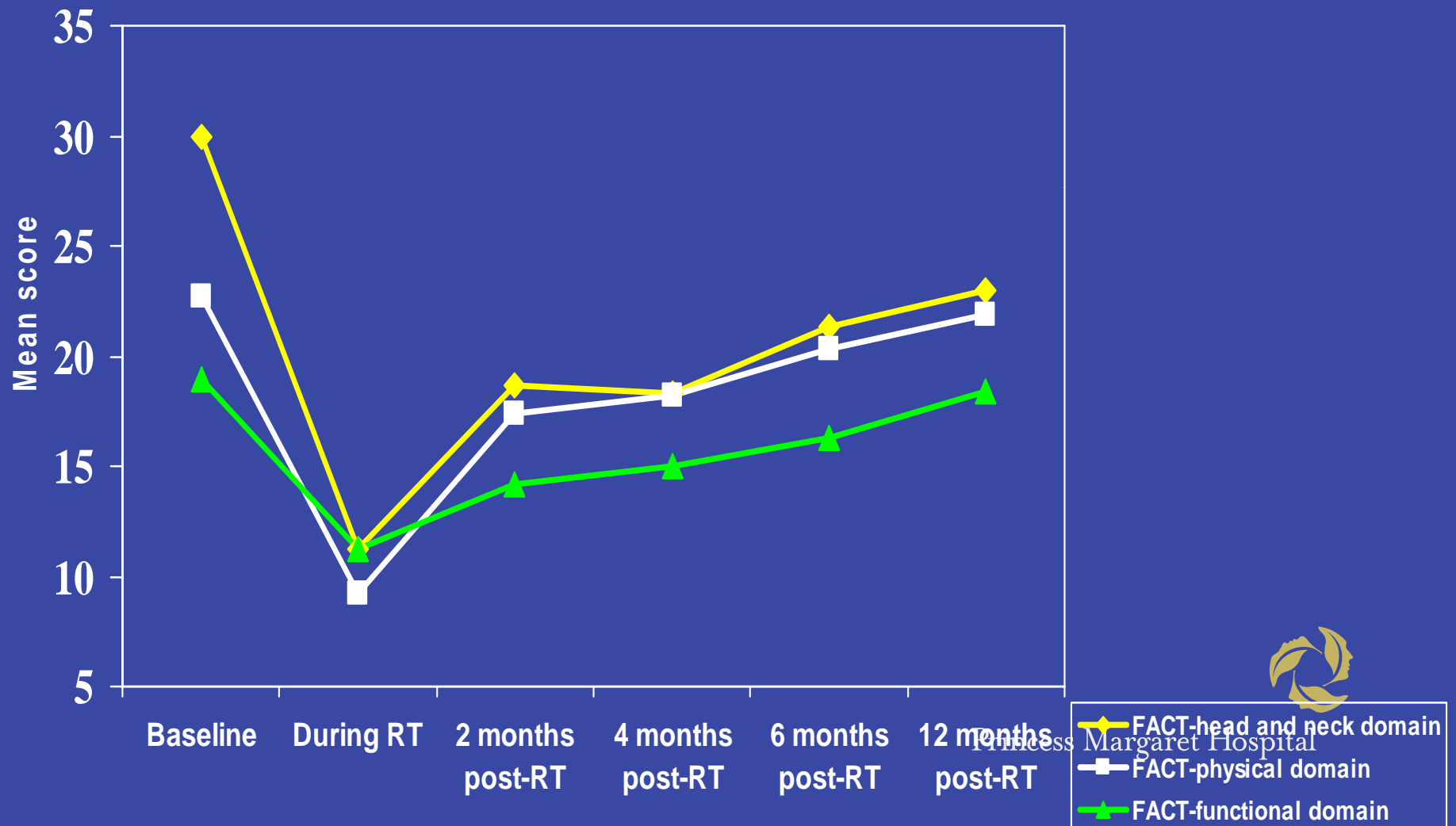
FACT-H&N



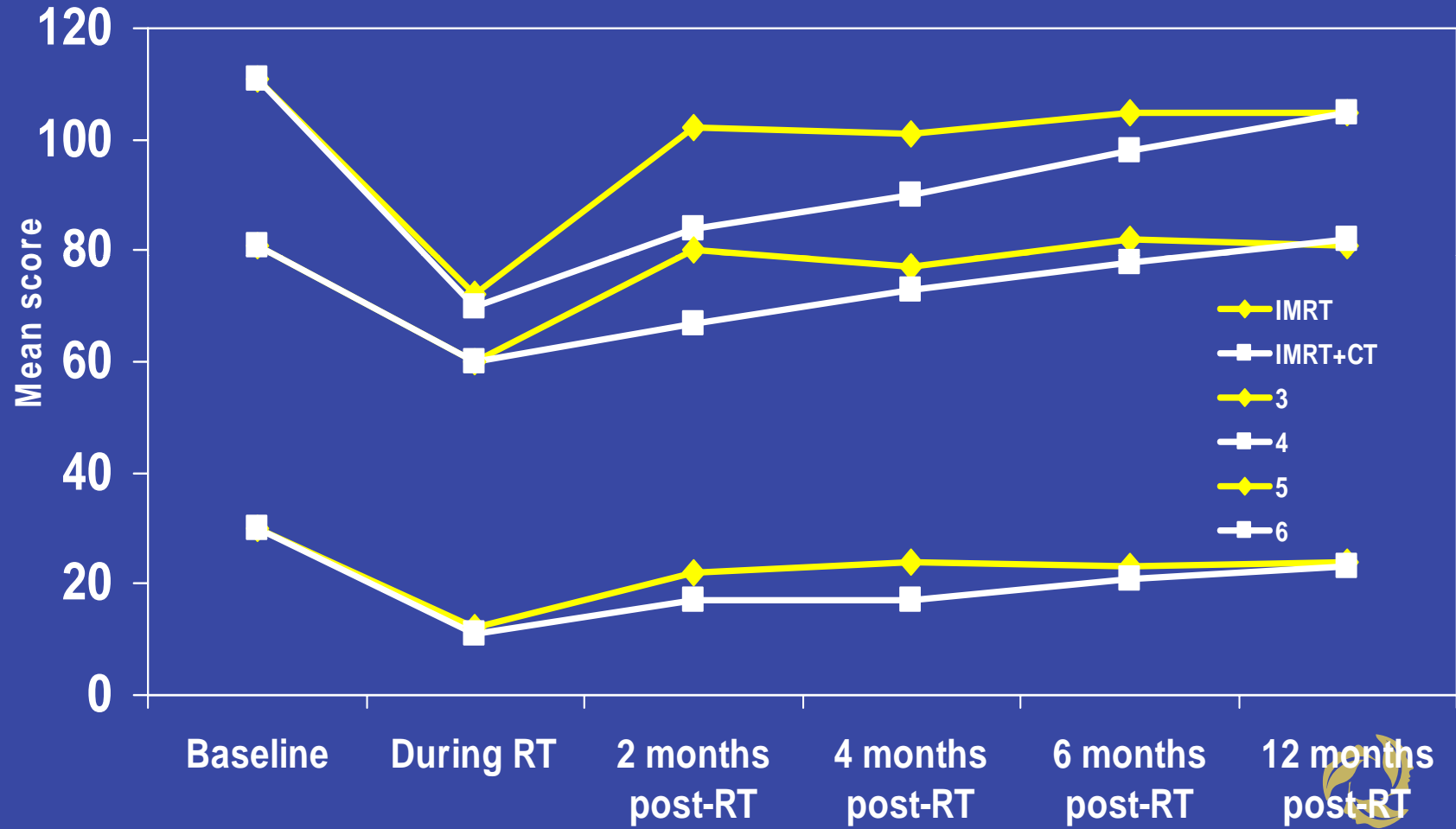
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FACT-H&N

FACT-H&N subscale analysis



ChemoRT (white) vs RT patients (yellow): FACT-H&N



Ongoing Trials

- Phase III randomized trial of concurrent chemo/RT +/- tirapazamine in advanced H&N cancer (850 patients, 16 countries)
 - hypothesis: decreased early QOL but increased late QOL in experimental arm
- Phase III randomized trial of accelerated RT/panitumumab vs chemoRT in advanced H&N cancer ; dysphagia outcomes
 - hypothesis: improved early and late QOL compared to patients treated with chemoRT

Conclusions

- Limited prospective, controlled data on QOL in H&N cancer pts on chemoRT
- Data shows impaired QOL during treatment, usually with return to baseline by 12 months
- Baseline is not “normal” QOL!
- QOL specifically related to H&N symptoms, including xerostomia and dysphagia, remain impaired at 12 months
- Interventions to improve QOL have not been tested



