

Meta-analyses in Nasopharyngeal Cancer

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Conflict of interest Disclosure

- No relevant conflict of interest

META-ANALYSES: WHEN?

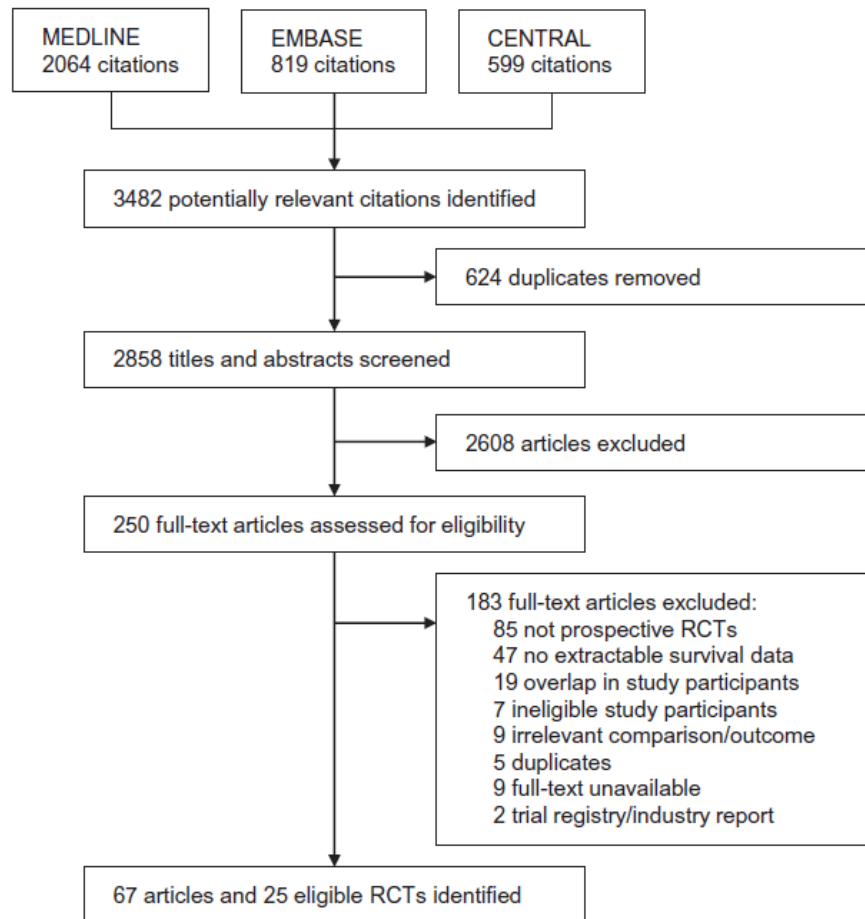
- Despite numerous trials: no clear answer
 - Lack of power ?
 - No treatment effect ?

META-ANALYSES: HOW?

- Exhaustivity / Reproducibility / Quantification
 - Systematic Review of Literature
 - Published-data based meta-analyses
 - Individual patient data based meta-analyses

BIG DATA ???

Trials selection

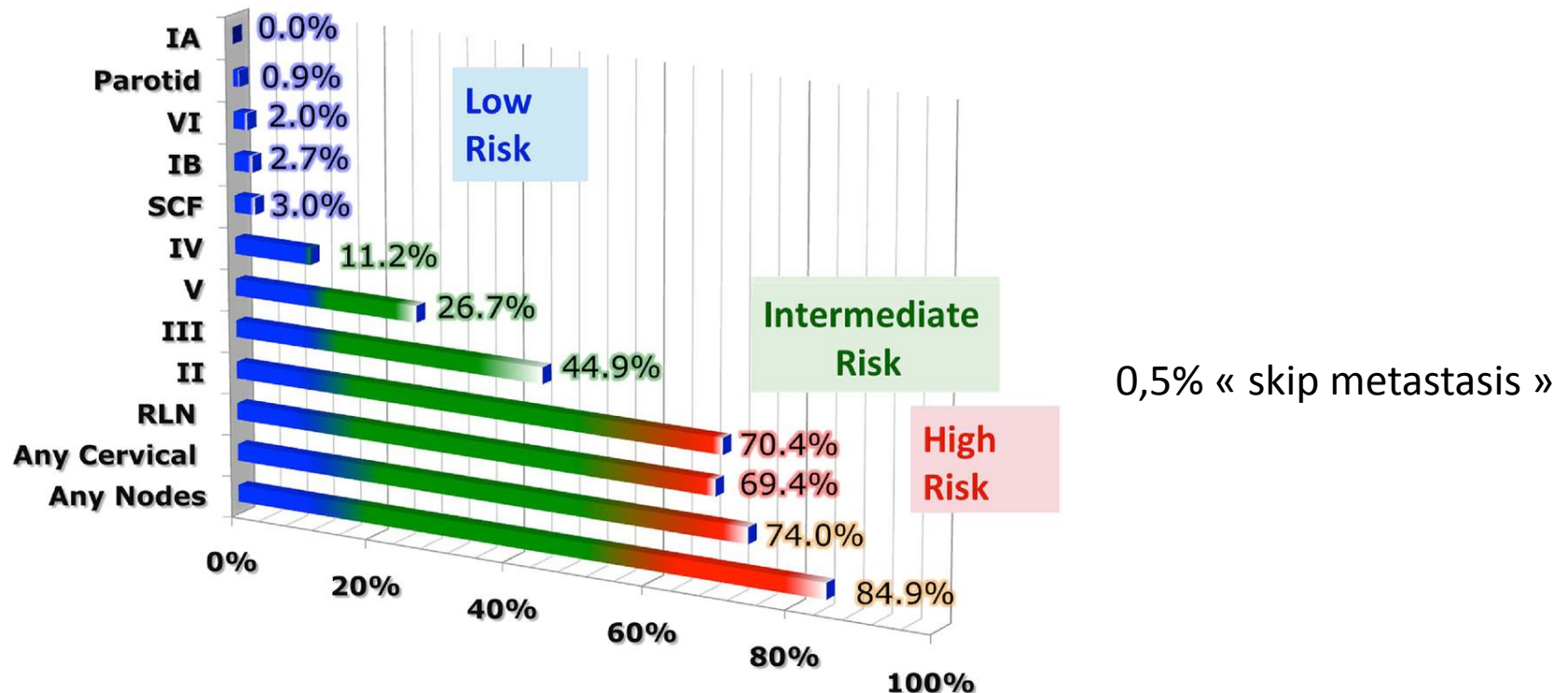


Systematic reviews in NPC

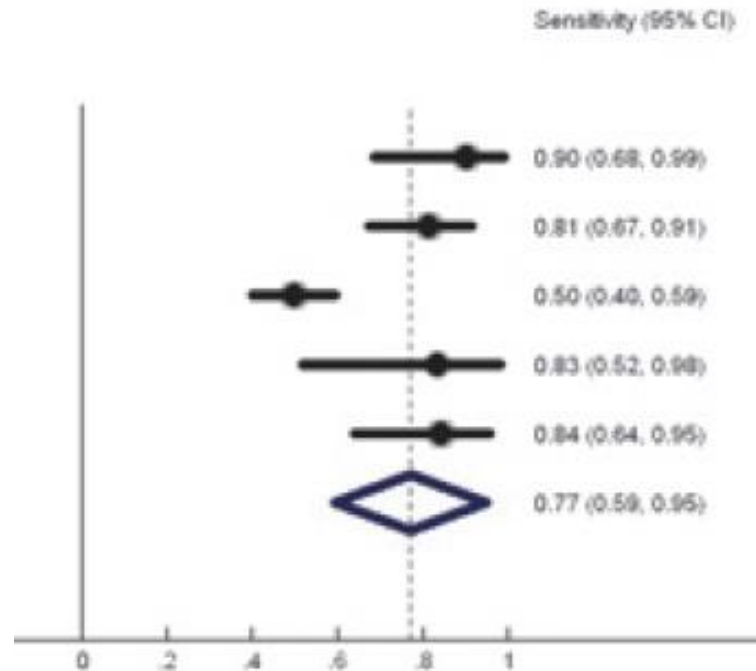
- Jia WH and coll: Sem cancer Biol 2012
 - NPC risk: EBV++
 - ↓ in Chinese immigrants in low-risk countries
 - ↑ with Salted fish / salted vegetables (N nitrosamine)
 - ↓ with fresh vegetables and fruits
 - ↑ with high alcohol consumption
 - ↑ with Tobacco consumption (+ dose effect)
 - ↑ with wood dust
 - ↑ with formaldehyde ?
 - Interaction genetic / environmental factors
 - HLA-A (Su WH, BMC cancer 2015)

META-ANALYSES not focused on RCT

- **Patterns of regional lymph node metastasis of nasopharyngeal carcinoma: A meta-analysis of clinical evidence. Ho FC and coll. BMC cancer 2012: 13 studies, 2920 patients**



Beware Heterogeneity

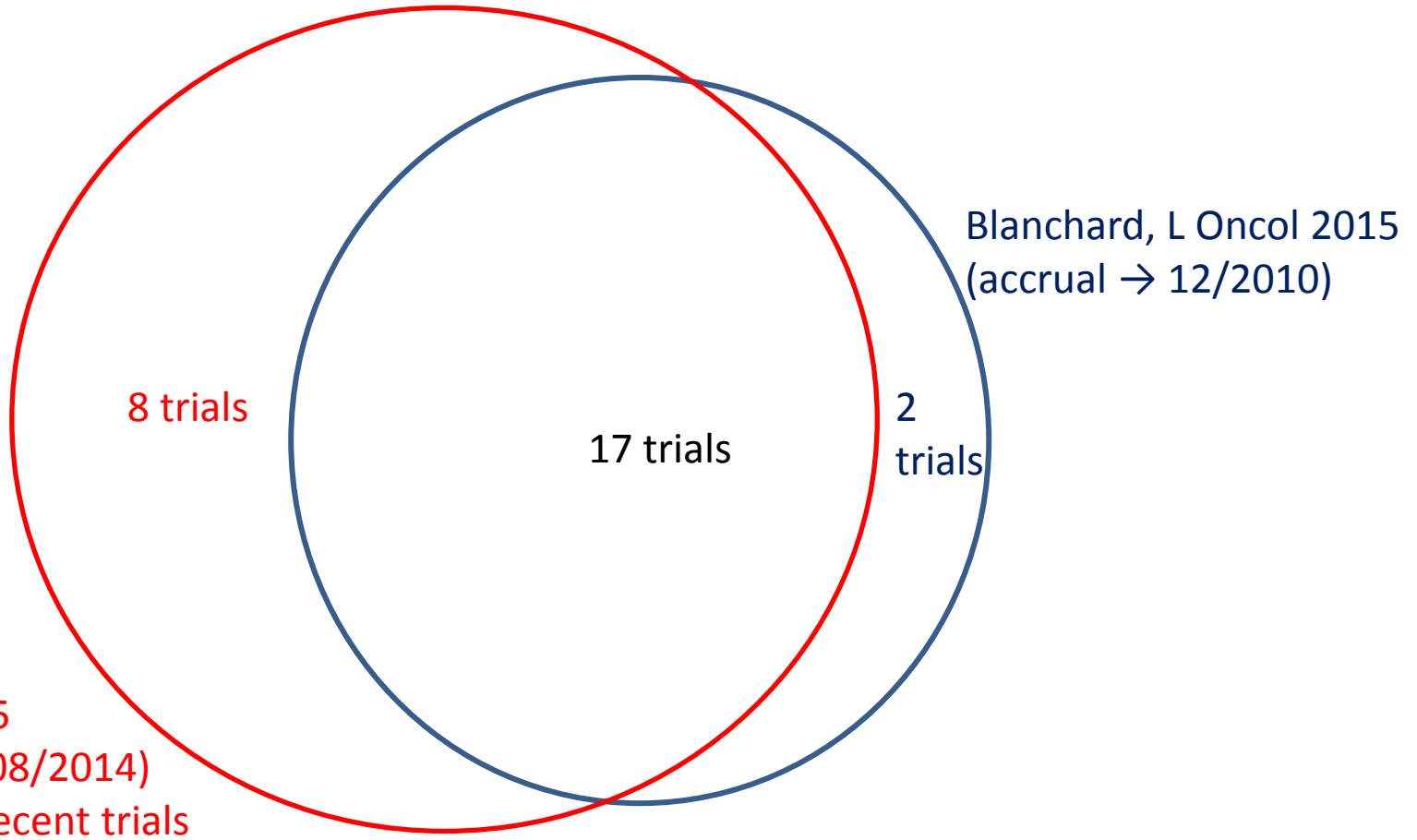


- Vallayapan and coll Radiol Oncol 2014. TEP FDG in NPC

META-ANALYSES of RCT

- Literature-based
- Individual Patient Data-based
- Is CT useful in NPC? How to deliver it?

Trials Selection



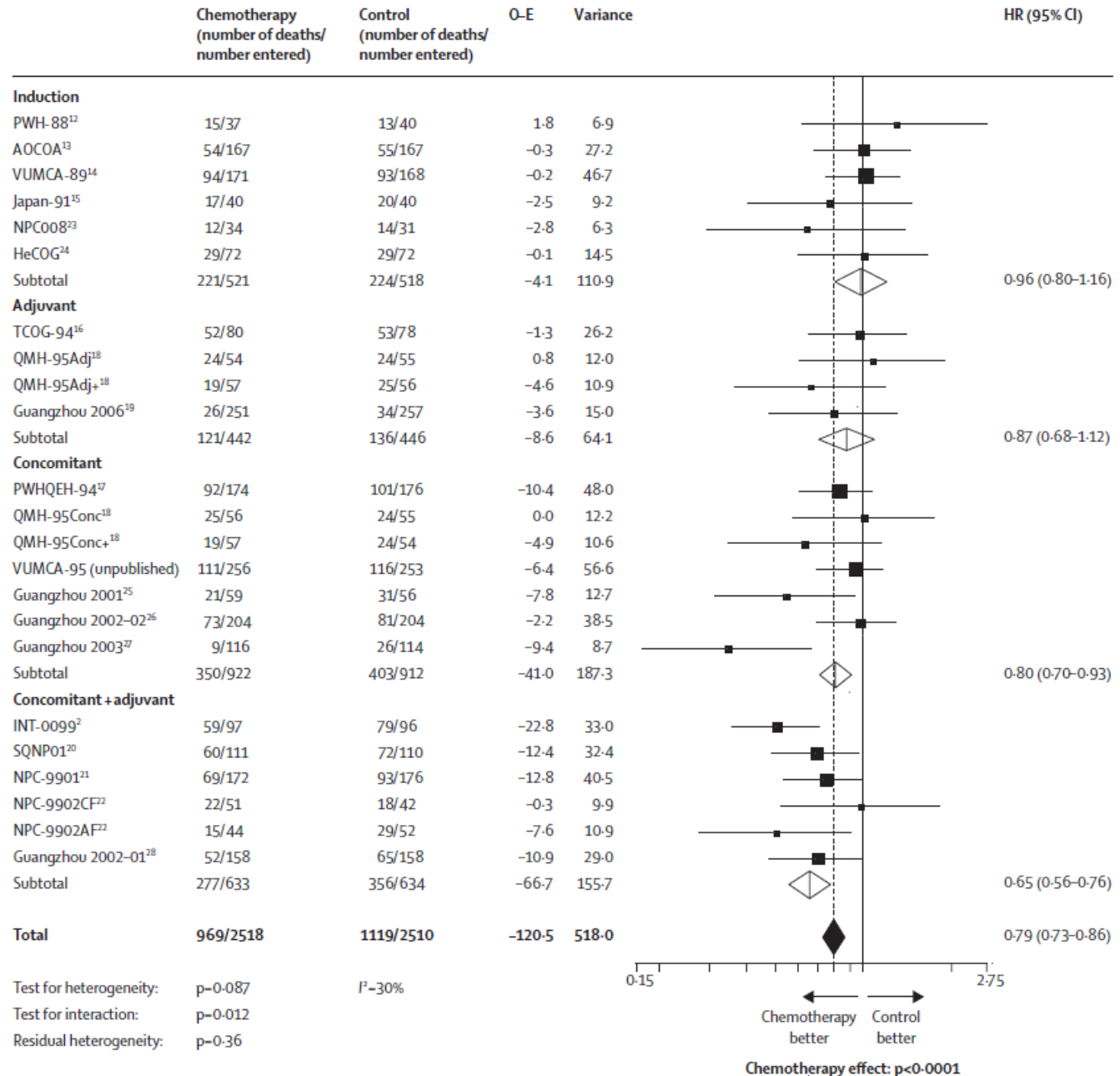
IPD Meta-analyses

- Authors requested to provide their patients data
- Intent-to-treat analyses (patients excluded after randomization reincluded)
- Checking cumulative accrual between arms
- Checking follow up (median follow-up, reverse Kaplan Meier)
- Updating data
- Inclusion of unpublished results
- Data re-analyzed + validation by authors.

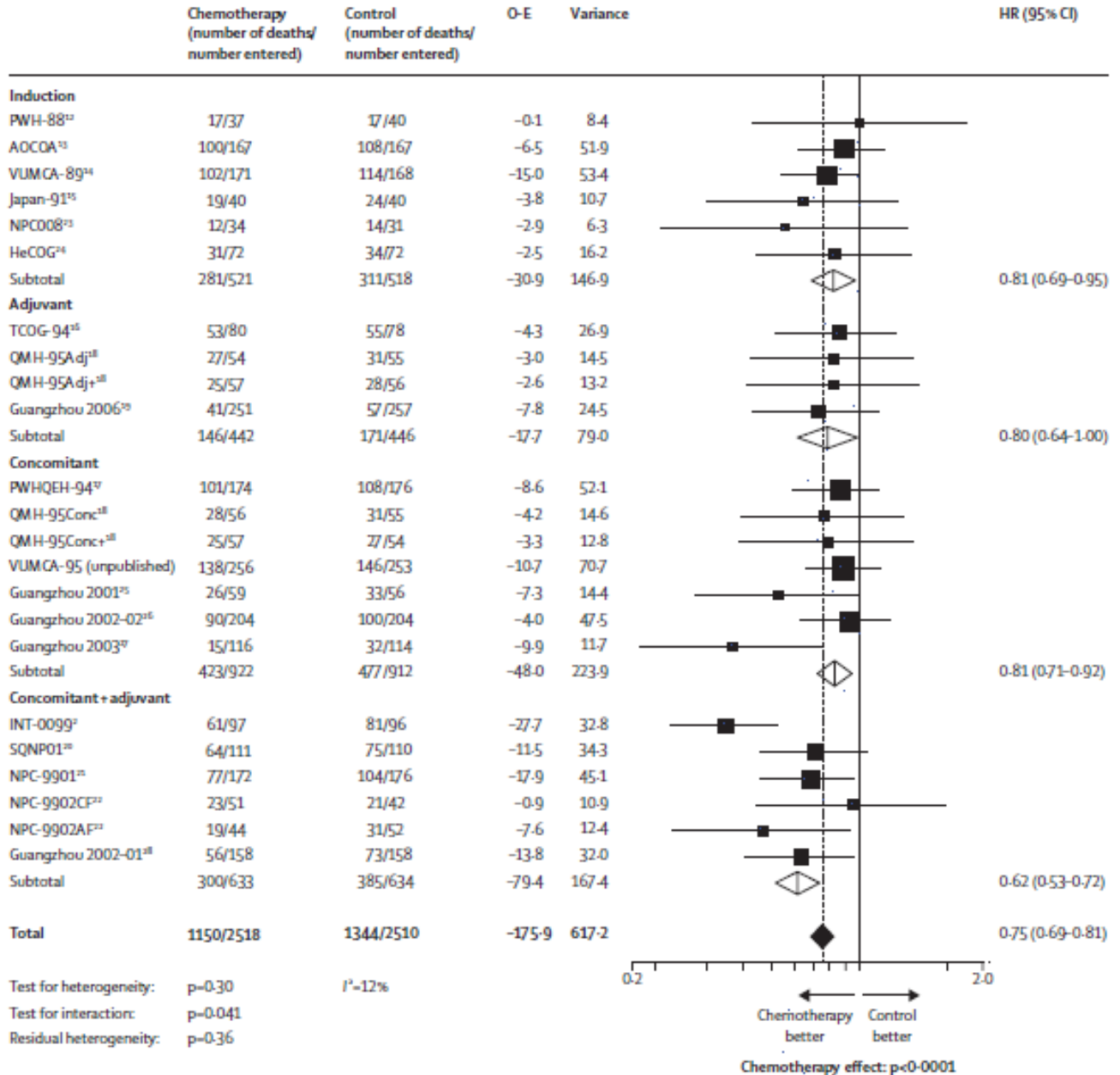
Blanchard Lancet Oncol 2015

- Update of Baujat Int J Rad Oncol Biol Phys 2005:
Concomitant CT improves Overall survival in NPC
- Question: Is CRT+ Adjuvant CT better than CRT alone?

Results: Overall Survival

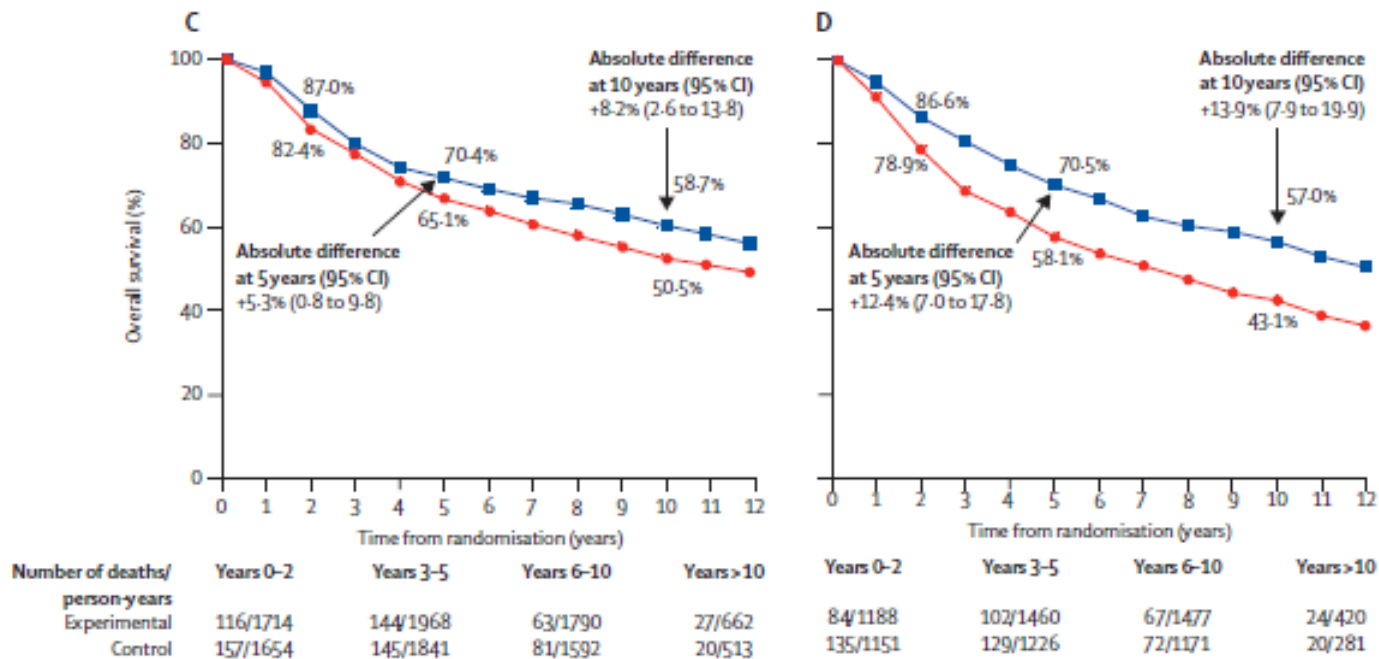


Results: Progression Free Survival



Is CRT+A superior to CRT alone?

- No statistically significant difference between groups of trial
- Tendancy toward a stronger treatment effect with CRT+A



But

- Non platin based CT in CRT group
- More acute toxicity with CRT+A
- Low compliance
- More long-term toxicity with CT (Hearing deficit 21% vs 15%; Cranial nerve palsy 11% vs 9%)
- Same conclusion for Liang and coll 2012 Asian Pacif J Canc Prev (5 trials, 3 in common)

Induction CT ? Adjuvant CT?

- Objective: DM control
- No interaction between CT timing and CT effect for Loco regional / distant failure rate
- Induction CT with Taxane / Capecitabine (Lee and coll, Cancer 2015, NPC-0501)

Conclusion

- MA of Randomized trials provide level 1 evidence
- Rigorous selection of trials / exploration of heterogeneity
- IPD MA = Gold standard, but long process
 - Post hoc validation
 - Loss of « satellite » information
- Importance of using standardized time-to-event endpoints (Bellera Eur J Can 2012, DATECAN project) and classifications