

Abstract 6523: Network meta-analysis of chemotherapy in nasopharyngeal carcinoma (MAC-NPC):

An update on 8,214 patients.

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Background:

The benefit of induction or adjuvant chemotherapy added to concomitant chemoradiation is unclear in NPC.

We aimed to compare the role different timings of chemotherapy in the treatment of locally advanced nasopharyngeal carcinoma using a network meta-analysis of randomized trials.

Methods:

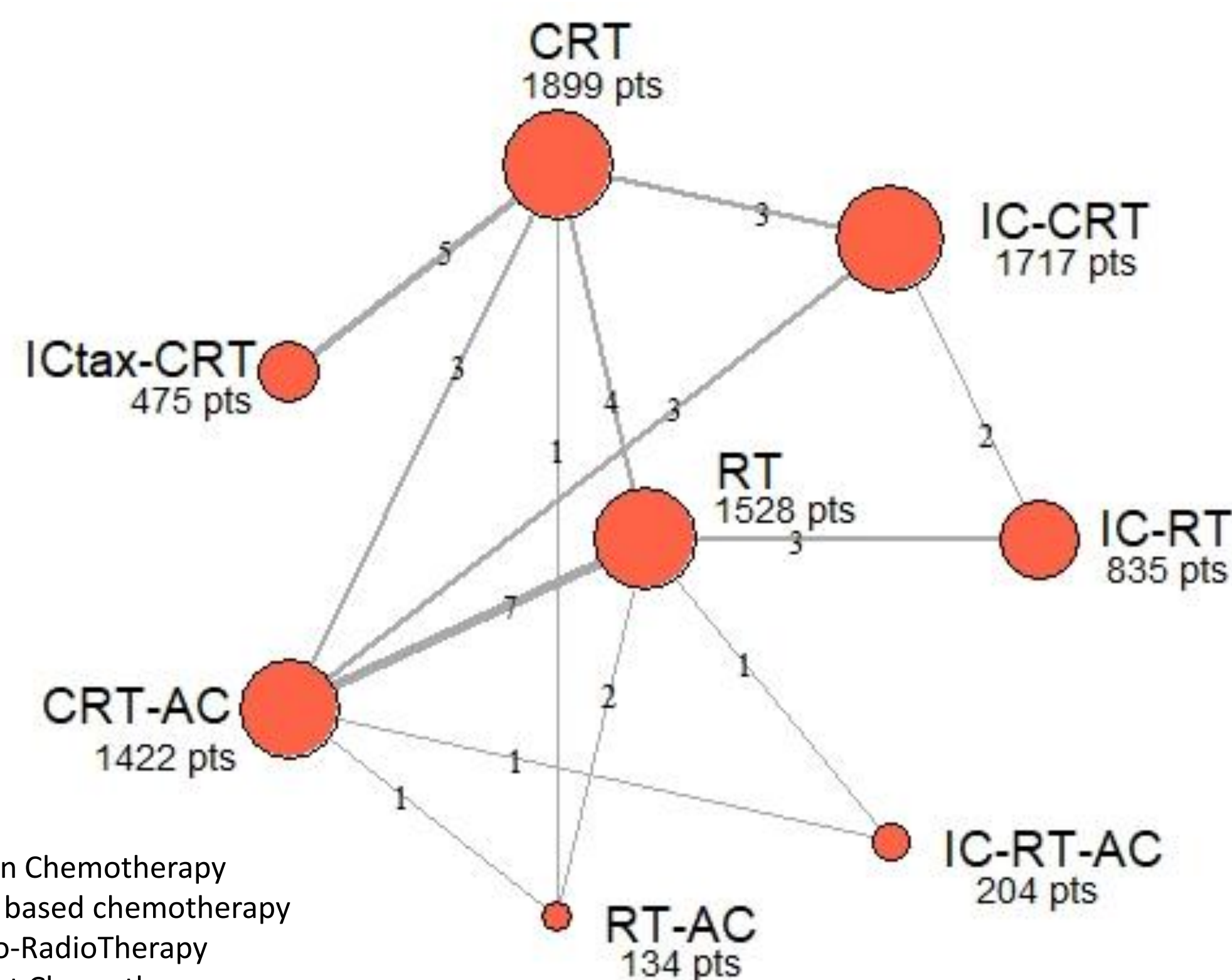
Estimation of HR for each comparison using individual patient data Frequentist approach and fixed effect model for network meta-analysis

Study of heterogeneity and inconsistency of treatment effect

Pscore: probability of being the best treatment (%)

R software - package netmeta

Trial search: 28 trials corresponding to 36 comparisons (due to multi-arm trials or separation of trial with different modalities of RT) – grouped in 8 treatment modalities.



IC= Induction Chemotherapy
Tax= taxane based chemotherapy
CRT= Chemo-RadioTherapy
AC= Adjuvant Chemotherapy
RT= RadioTherapy

1. Addition of induction or adjuvant chemotherapy to concomitant chemoradiotherapy (CRT) is superior to CRT alone for all endpoints (OS, PFS, LRC, DC) in locally advanced NPC.

2. No significant difference in OS/PFS when directly comparing IC-CRT and CRT-AC.



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Results/Graphs/Data:

Ranking: First Second Third

Overall survival: main and sensitivity analyses

Treatment data	Main analysis		Seven modalities		Without Old drugs	
	HR [95% CI]	p-score	HR [95% CI]	p-score	HR [95% CI]	p-score
28 trials 8,214 patients 3,073 events			Lumping of ICtax-CRT and IC-CRT		18 trials 5,426 patients 1,797 events	
P value heterogeneity	0.18		0.22		0.08	
P value inconsistency	0.10		0.09		0.48	
CRT	reference	46.3%	reference	52%	reference	42%
ICtax-CRT	0.75 [0.59-0.96]	92%	/ /		0.70 [0.50-0.97]	87%
IC-CRT	0.81 [0.69-0.95]	87%	0.79 [0.69-0.91]	97%	0.69 [0.53-0.91]	90%
CRT-AC	0.88 [0.75-1.04]	72%	0.87 [0.74-1.03]	81%	0.92 [0.73-1.17]	55%
IC-RT	1.01 [0.83-1.22]	45.7%	0.99 [0.82-1.19]	54%	/ /	

Other endpoints

Treatment	Progression-free survival		Loco-regional control		Distant control	
	HR [95%CI]	Pscore	HR [95%CI]	Pscore	HR [CI95%]	Pscore
8,214 patients 3,736 events			8,057 patients 1,308 events		8,161 patients 1,698 events	
ICtax-CRT	0.72 [0.58-0.89]	89%	0.89 [0.62-1.28]	45%	0.62 [0.45-0.84]	92%
IC-CRT	0.72 [0.62-0.83]	92%	0.80 [0.63-1.01]	65%	0.67 [0.55-0.82]	88%
CRT-AC	0.83 [0.71-0.97]	69%	0.74 [0.56-0.99]	74%	0.85 [0.68-1.06]	59%
CRT	reference	34%	reference	25%	reference	40%
IC-RT	0.89 [0.75-1.06]	56%	0.96 [0.73-1.27]	32%	0.77 [0.59-1.01]	70%
IC-RT-AC	1.09 [0.76-1.56]	25%	0.62 [0.35-1.10]	85%	1.56 [0.94-2.59]	7%
RT-AC	1.05 [0.77-1.44]	29%	0.75 [0.43-1.32]	66%	1.15 [0.71-1.84]	30%
RT	1.24 [1.08-1.43]	5%	1.13 [0.88-1.44]	7%	1.35 [1.09-1.66]	14%

Future Directions for Research:

- Toxicity will be analyzed.
- The effect of age will be studied to explore if one or the other type of chemotherapy could be advised to personalize treatment.