

Supplementary Material File 5: NMA results

5.1: Model fit parameters

Table 1: Model fit parameters for fixed- and random-effects models for NMAs of RCTs

	FE Model	RE Models	
		Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
Overall Survival (17 data-points)			
DIC	29.88	29.87	30.20
Total Residual Deviance [†] , Mean	19.88	18.31	17.42
Between-study SD, Median (95% CrI)	--	0.13 (0.01, 0.38)	0.22 (0.01, 0.63)
Progression-free Survival (7 data-points)			
DIC	10.42	10.94	11.45
Total Residual Deviance [†] , Mean	6.43	6.16	6.19
Between-study SD, Median (95% CrI)	--	0.11 (0.01, 0.35)	0.16 (0.01, 0.65)
Overall Recurrence (7 data-points)			
DIC	12.01	12.53	12.93
Total Residual Deviance [†] , Mean	6.01	6.27	6.47
Between-study SD, Median (95% CrI)	--	0.11 (0.005, 0.38)	0.20 (0.01, 0.90)
Local Recurrence (12 data-points)			
DIC	21.15	20.95	21.12
Total Residual Deviance [†] , Mean	13.15	12.36	11.68
Between-study SD, Median (95% CrI)	--	0.14 (0.01, 0.42)	0.30 (0.02, 0.88)

[†] compared to the number of data-points

Abbreviations: CrI: credible intervals, FE: fixed-effect, RE: random-effects, SD: standard deviation

Table 2: Model fit parameters for fixed- and random-effects models for NMAs of RCT and non-RCT studies

	FE Model	RE Models	
		Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
Overall Survival (20 data-points)			
DIC	32.46	32.73	33.65
Total Residual Deviance [†] , Mean	21.47	20.29	20.04
Between-study SD, Median (95% CrI)	--	0.11 (0.005, 0.34)	0.15 (0.01, 0.51)
Progression-free Survival (11 data-points)			
DIC	14.70	15.65	16.12
Total Residual Deviance ^{†‡} , Mean	8.70	8.70	8.74
Between-study SD, Median (95% CrI)	--	0.09 (0.004, 0.15)	0.12 (0.01, 0.49)
Local Recurrence (14 data-points)			
DIC	24.12	23.93	24.30
Total Residual Deviance [†] , Mean	15.14	14.22	13.58
Between-study SD, Median (95% CrI)	--	0.13 (0.01, 0.42)	0.27 (0.01, 0.80)

[†] compared to the number of data-points. [‡] The residual deviance for the RCT Ng (2017)¹ and non-RCT Qian (2012)² is very low, which contributes to the low total residual deviance. Both studies have very small sample sizes (see Table 2 and Table 6 in Supplementary Material File 4).

Abbreviations: CrI: credible intervals, FE: fixed-effect, RE: random-effects, SD: standard deviation

5.2: Consistency checking

NMAs of RCTs only

Overall survival

Each data point's contribution to the residual deviance in the unrelated mean effects (UME) inconsistency model was compared to its contribution to the residual deviance in the NMA model (Figure 1). The points for two studies: Fang (2014)³ (which compares resection and RFA) and Shibata (2009)⁴ (which compares RFA and RFA+TACE) lie below the line of inequality. This inconsistency was assessed through node-splitting. The results of the node-splitting model are presented in Table 3.

Figure 1: Deviance contribution plot for overall survival for the fixed-effect model

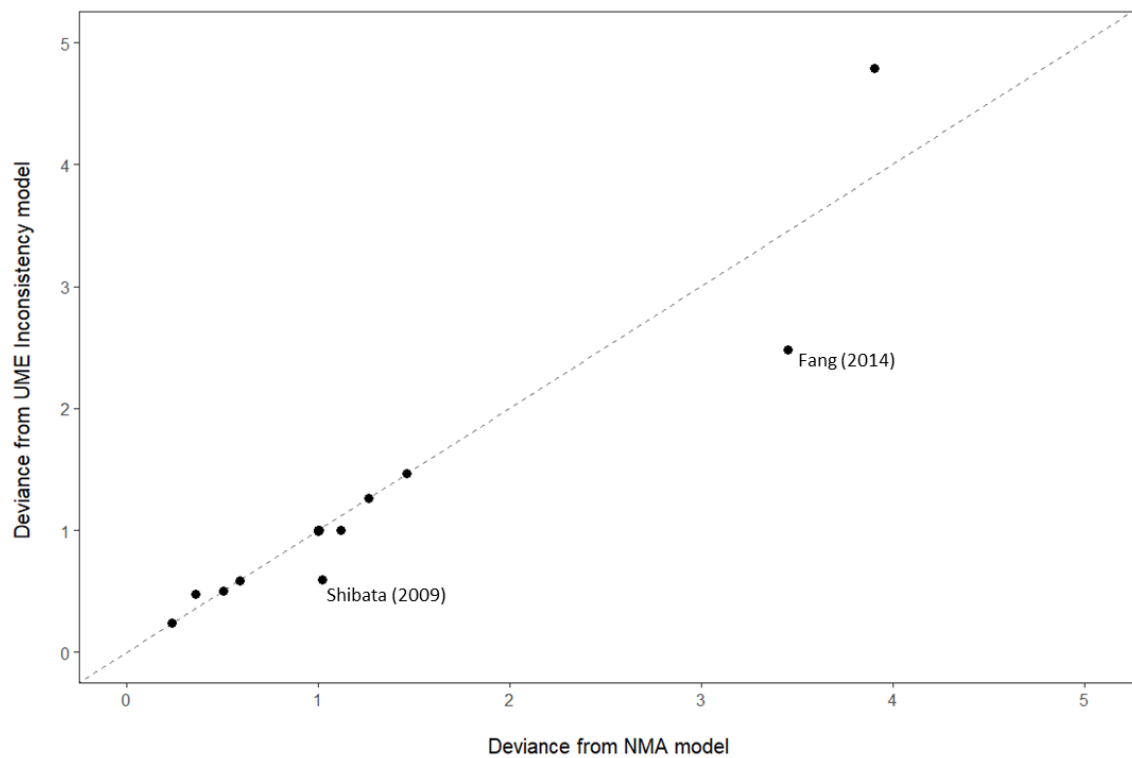


Table 3: Node-splitting results for overall survival for the fixed-effect model

Comparison	Model	<i>p</i>	LHRs (95% CrI)
<i>Resection vs. RFA</i>			
	Direct	0.222	-0.044 (-0.445, 0.356)
	Indirect		-0.718 (-1.725, 0.291)
	Network		-0.137 (-0.511, 0.237)
<i>RFA + TACE vs. RFA</i>			
	Direct	0.223	-0.332 (-1.186, 0.531)
	Indirect		0.346 (-0.328, 1.011)
	Network		0.086 (-0.435, 0.614)
<i>RFA + TACE vs. Resection</i>			
	Direct	0.220	0.389 (-0.147, 0.926)
	Indirect		-0.287 (-1.225, 0.657)
	Network		0.224 (-0.238, 0.687)

Negative valued LHRs favour the first named treatment

Abbreviations: CrI: credible interval, LHR: log-hazard ratio

Overall recurrence

Each data point's contribution to the residual deviance in the UME inconsistency model was compared to its contribution to the residual deviance in the NMA model (Figure 2). No points in the plot lie below the line of inequality. Potential inconsistency in the model was also assessed through node-splitting. The results of the node-splitting model are presented in Table 4.

Figure 2: Deviance contribution plot for overall recurrence for the fixed-effect model

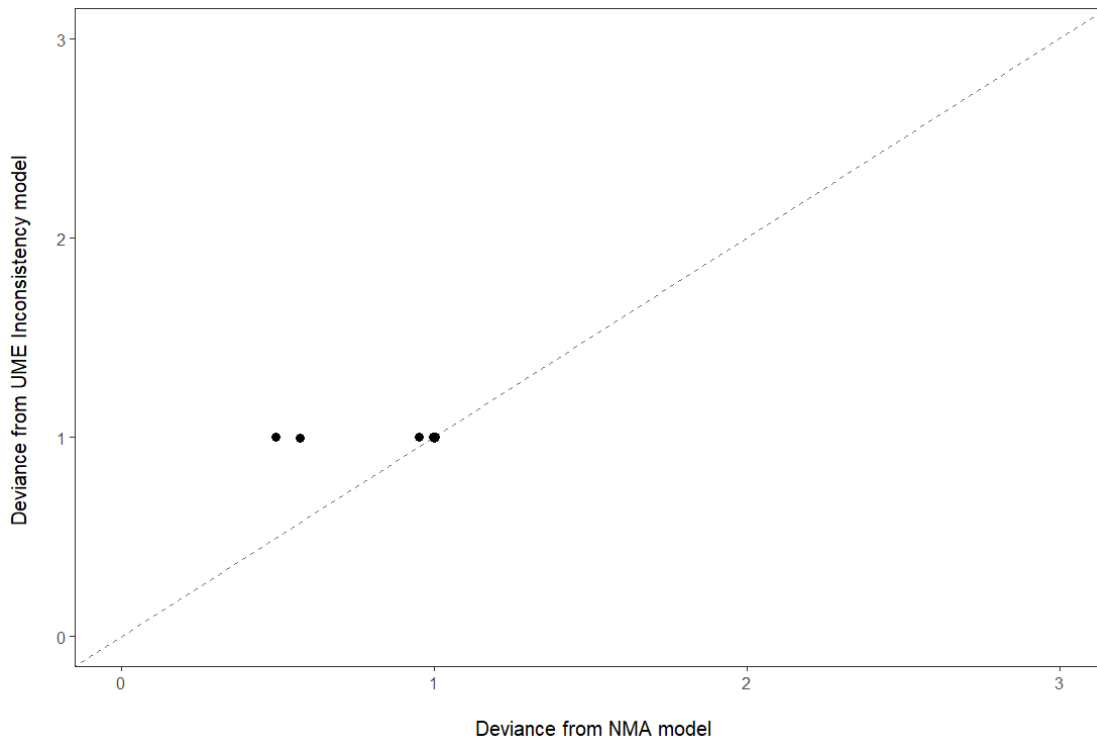


Table 4: Node-splitting results for overall recurrence for the fixed-effect model

Comparison	Model	<i>p</i>	LRRs (95% CrI)
<i>PEI vs. RFA</i>			
	Direct	0.906	0.177 (0.017, 0.340)
	Indirect		0.134 (-0.571, 0.840)
	Network		0.176 (0.018, 0.333)
<i>Resection vs. RFA</i>			
	Direct	0.911	-0.046 (-0.526, 0.433)
	Indirect		-0.005 (-0.548, 0.540)
	Network		-0.029 (-0.385, 0.331)
<i>Resection vs. PEI</i>			
	Direct	0.913	-0.182 (-0.702, 0.339)
	Indirect		-0.222 (-0.729, 0.273)
	Network		-0.204 (-0.565, 0.160)

Negative valued LRRs favour the first named treatment

Abbreviations: CrI: credible interval, LHR: log-relative risk

NMAs of RCT and non-RCT evidence

Overall survival

Each data point's contribution to the residual deviance in the UME inconsistency model was compared to its contribution to the residual deviance in the NMA model (Figure 3). The results for this comparison were consistent with the results obtained using only randomised evidence. The points for two studies: Fang (2014)³ and Shibata (2009)⁴ lie below the line of inequality. This inconsistency was assessed through node-splitting. The results of the node-splitting model are presented in Table 5.

Figure 3: Deviance contribution plot for overall survival for the fixed-effect model

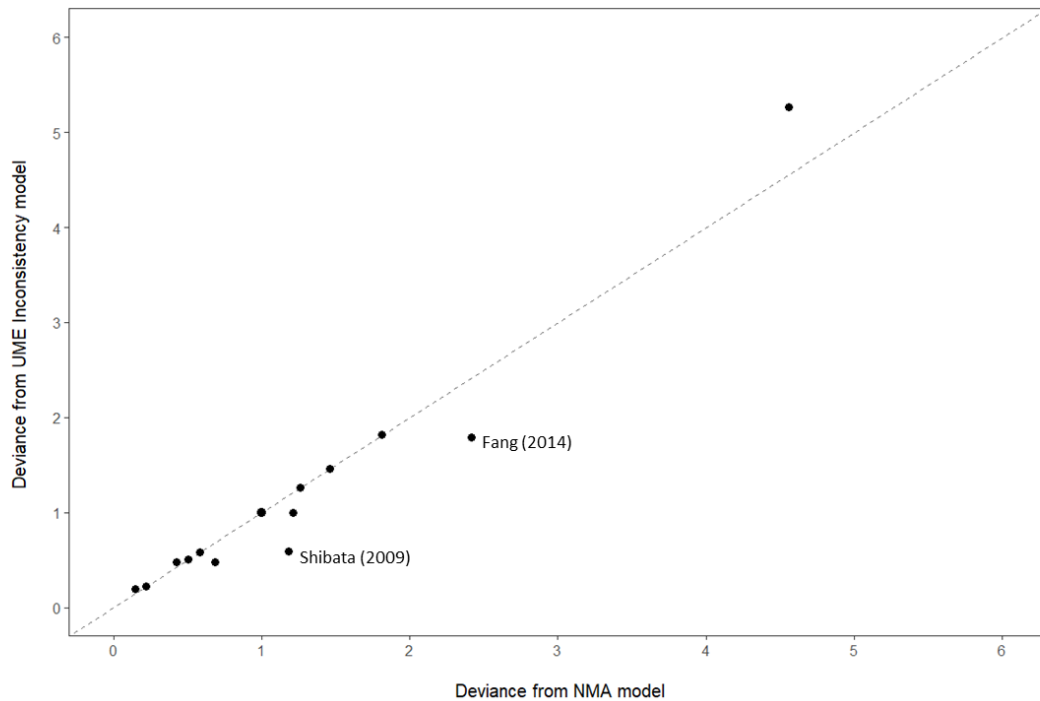


Table 5: Node-splitting results for overall survival for the fixed-effect model

Comparison	Model	<i>p</i>	LHRs (95% CrI)
<i>Resection vs. RFA</i>			
	Direct	0.172	0.010 (-0.315, 0.338)
	Indirect		-0.721 (-1.726, 0.284)
	Network		-0.061 (-0.371, 0.249)
<i>RFA + TACE vs. RFA</i>			
	Direct	0.179	-0.329 (-1.183, 0.520)
	Indirect		0.401 (-0.234, 1.029)
	Network		0.142 (-0.364, 0.645)
<i>RFA + TACE vs. Resection</i>			
	Direct	0.175	0.389 (-0.142, 0.929)
	Indirect		-0.339 (-1.246, 0.570)
	Network		0.203 (-0.264, 0.665)

Negative valued LHRs favour the first named treatment

Abbreviations: CrI: credible interval, LHR: log-hazard ratio

5.3: Result estimates for NMAs

NMAs of RCTs only

Overall survival

Figure 4: Density plots for between-study standard deviation (SD) for overall survival

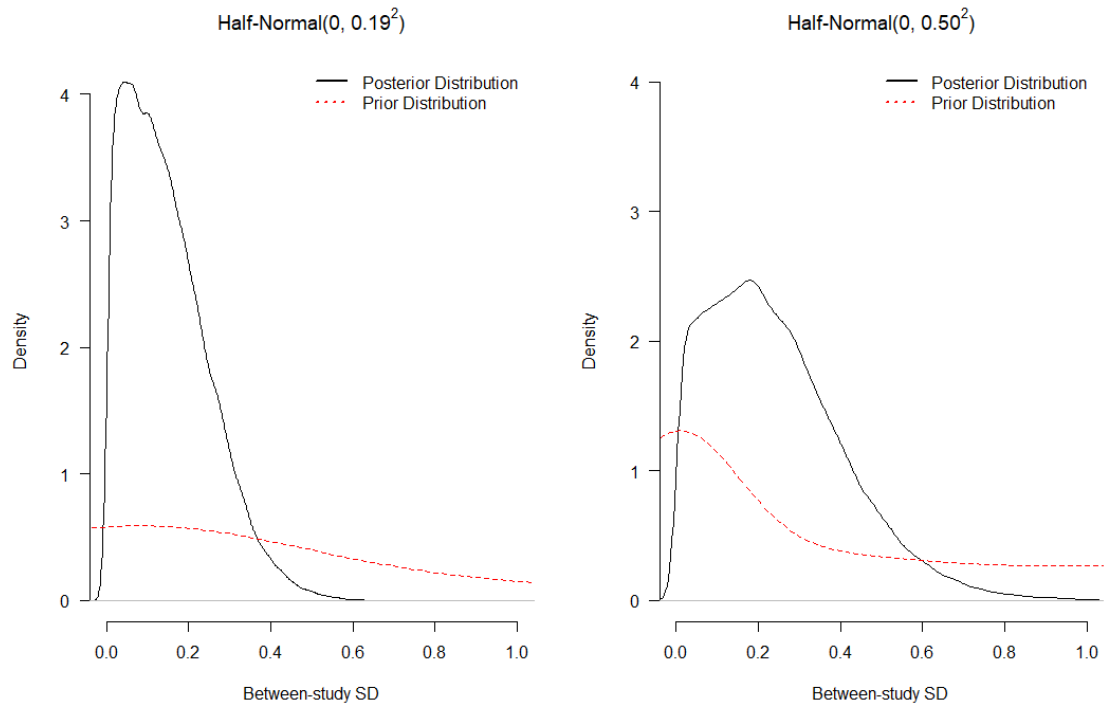


Table 6: Hazard Ratios for overall survival for fixed and random-effects models

Comparator	Baseline Intervention	Hazard Ratios (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.45 (1.16, 1.82)	1.45 (1.08, 1.94)	1.45 (0.99, 2.10)
PAI	RFA	1.80 (0.97, 3.37)	1.81 (0.89, 3.65)	1.79 (0.80, 4.06)
Resection	RFA	0.87 (0.60, 1.26)	0.84 (0.54, 1.28)	0.83 (0.49, 1.32)
MWA	RFA	0.94 (0.43, 2.05)	0.94 (0.39, 2.21)	0.93 (0.36, 2.47)
TACE + PEI	RFA	1.02 (0.40, 2.59)	1.02 (0.37, 2.74)	1.01 (0.32, 3.12)
TACE + PAI	RFA	1.88 (0.73, 4.80)	1.88 (0.65, 5.38)	1.86 (0.55, 6.34)
RFA + TACE	RFA	1.09 (0.64, 1.85)	1.04 (0.57, 1.86)	1.01 (0.49, 1.91)
RFA + Iodine-125	RFA	0.50 (0.31, 0.80)	0.50 (0.28, 0.90)	0.50 (0.23, 1.07)
RFA + PEI	RFA	0.90 (0.29, 2.78)	0.90 (0.28, 2.92)	0.89 (0.25, 3.15)
Laser	RFA	1.46 (0.82, 2.59)	1.46 (0.75, 2.88)	1.46 (0.64, 3.30)
PAI	PEI	1.24 (0.69, 2.22)	1.25 (0.64, 2.45)	1.24 (0.56, 2.76)
Resection	PEI	0.60 (0.39, 0.92)	0.58 (0.34, 0.97)	0.57 (0.30, 1.04)
MWA	PEI	0.64 (0.28, 1.45)	0.65 (0.26, 1.61)	0.65 (0.23, 1.83)
TACE + PEI	PEI	0.70 (0.28, 1.73)	0.70 (0.26, 1.83)	0.70 (0.24, 2.05)
TACE + PAI	PEI	1.29 (0.51, 3.22)	1.30 (0.46, 3.66)	1.29 (0.39, 4.35)
RFA + TACE	PEI	0.75 (0.42, 1.33)	0.72 (0.37, 1.38)	0.70 (0.31, 1.45)
RFA + Iodine-125	PEI	0.35 (0.20, 0.58)	0.35 (0.18, 0.67)	0.35 (0.15, 0.81)
RFA + PEI	PEI	0.62 (0.20, 1.96)	0.62 (0.19, 2.09)	0.62 (0.16, 2.30)
Laser	PEI	1.00 (0.54, 1.86)	1.01 (0.48, 2.11)	1.01 (0.41, 2.50)
Resection	PAI	0.48 (0.23, 1.00)	0.47 (0.20, 1.06)	0.46 (0.17, 1.17)
MWA	PAI	0.52 (0.19, 1.41)	0.52 (0.17, 1.57)	0.52 (0.15, 1.85)
TACE + PEI	PAI	0.57 (0.19, 1.66)	0.56 (0.17, 1.81)	0.56 (0.15, 2.13)
TACE + PAI	PAI	1.04 (0.51, 2.11)	1.04 (0.47, 2.26)	1.04 (0.42, 2.59)
RFA + TACE	PAI	0.60 (0.27, 1.37)	0.58 (0.23, 1.43)	0.56 (0.19, 1.56)
RFA + Iodine-125	PAI	0.28 (0.13, 0.61)	0.28 (0.11, 0.69)	0.28 (0.09, 0.85)
RFA + PEI	PAI	0.50 (0.14, 1.82)	0.50 (0.13, 1.96)	0.50 (0.11, 2.21)
Laser	PAI	0.81 (0.35, 1.89)	0.81 (0.31, 2.16)	0.81 (0.26, 2.57)
MWA	Resection	1.07 (0.45, 2.56)	1.11 (0.42, 2.93)	1.13 (0.39, 3.46)
TACE + PEI	Resection	1.17 (0.43, 3.19)	1.21 (0.40, 3.59)	1.22 (0.36, 4.31)
TACE + PAI	Resection	2.15 (0.78, 5.92)	2.21 (0.72, 7.05)	2.25 (0.62, 8.73)
RFA + TACE	Resection	1.25 (0.79, 1.99)	1.23 (0.72, 2.09)	1.22 (0.64, 2.26)
RFA + Iodine-125	Resection	0.58 (0.32, 1.05)	0.60 (0.29, 1.24)	0.61 (0.26, 1.56)
RFA + PEI	Resection	1.03 (0.31, 3.39)	1.06 (0.30, 3.77)	1.08 (0.28, 4.29)
Laser	Resection	1.68 (0.84, 3.32)	1.73 (0.79, 3.90)	1.76 (0.70, 4.75)
TACE + PEI	MWA	1.09 (0.32, 3.68)	1.08 (0.28, 4.08)	1.08 (0.24, 4.76)
TACE + PAI	MWA	2.01 (0.59, 6.82)	2.01 (0.51, 7.76)	1.99 (0.42, 9.37)
RFA + TACE	MWA	1.17 (0.45, 3.00)	1.11 (0.39, 3.19)	1.08 (0.32, 3.36)
RFA + Iodine-125	MWA	0.54 (0.21, 1.34)	0.54 (0.19, 1.54)	0.54 (0.16, 1.82)
RFA + PEI	MWA	0.96 (0.24, 3.81)	0.96 (0.22, 4.21)	0.95 (0.20, 4.74)
Laser	MWA	1.56 (0.59, 4.12)	1.56 (0.52, 4.69)	1.56 (0.44, 5.50)
TACE + PAI	TACE + PEI	1.84 (0.50, 6.66)	1.85 (0.45, 7.59)	1.84 (0.37, 9.35)
RFA + TACE	TACE + PEI	1.07 (0.37, 3.12)	1.02 (0.32, 3.33)	1.00 (0.26, 3.61)
RFA + Iodine-125	TACE + PEI	0.49 (0.17, 1.40)	0.49 (0.16, 1.61)	0.50 (0.13, 1.94)
RFA + PEI	TACE + PEI	0.88 (0.20, 3.81)	0.88 (0.19, 4.20)	0.89 (0.16, 4.79)
Laser	TACE + PEI	1.43 (0.48, 4.26)	1.44 (0.43, 4.89)	1.44 (0.36, 5.89)
RFA + TACE	TACE + PAI	0.58 (0.20, 1.71)	0.56 (0.16, 1.82)	0.54 (0.13, 2.10)
RFA + Iodine-125	TACE + PAI	0.27 (0.09, 0.77)	0.27 (0.08, 0.89)	0.27 (0.06, 1.13)
RFA + PEI	TACE + PAI	0.48 (0.11, 2.10)	0.48 (0.10, 2.35)	0.48 (0.08, 2.75)
Laser	TACE + PAI	0.78 (0.26, 2.36)	0.77 (0.22, 2.73)	0.78 (0.18, 3.38)
RFA + Iodine-125	RFA + TACE	0.46 (0.23, 0.93)	0.48 (0.21, 1.13)	0.50 (0.19, 1.44)
RFA + PEI	RFA + TACE	0.83 (0.24, 2.87)	0.87 (0.23, 3.25)	0.88 (0.22, 3.83)
Laser	RFA + TACE	1.34 (0.61, 2.91)	1.40 (0.58, 3.50)	1.44 (0.52, 4.38)
RFA + PEI	RFA + Iodine-125	1.80 (0.53, 6.11)	1.78 (0.48, 6.68)	1.77 (0.41, 7.73)
Laser	RFA + Iodine-125	2.91 (1.39, 6.11)	2.89 (1.19, 7.10)	2.90 (0.95, 8.88)
Laser	RFA + PEI	1.62 (0.46, 5.79)	1.62 (0.42, 6.38)	0.61 (0.14, 2.74)

HRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible interval, FE: fixed-effect, RE: random-effect

Progression-free survival

Figure 5: Density plots for between-study standard deviation (SD) for progression-free survival

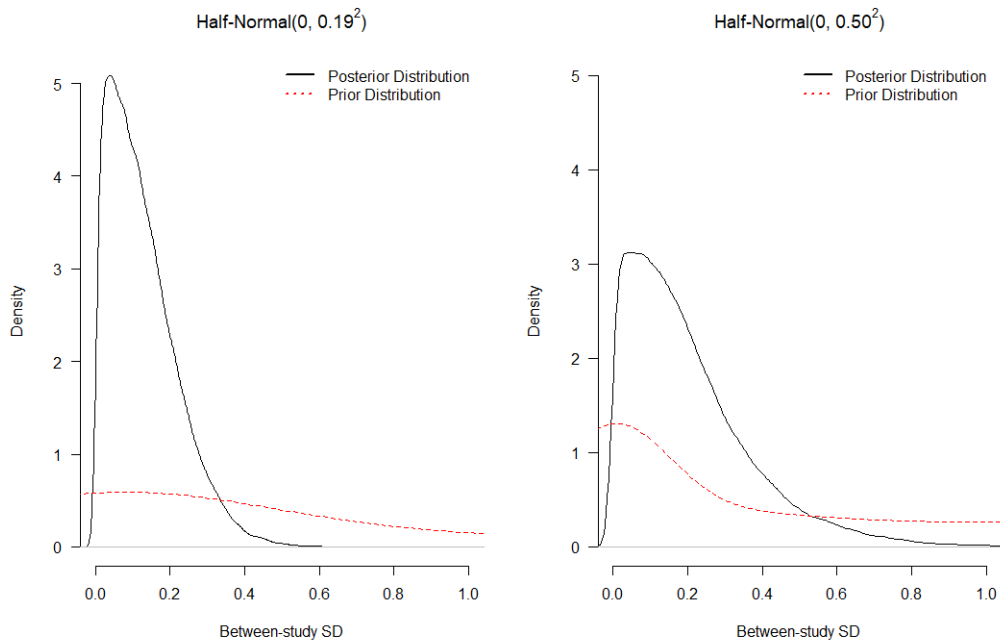


Table 7: Hazard Ratios (HRs) for PFS for the fixed- and random-effects models

Comparator	Baseline Intervention	Hazard Ratios (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) Prior	Half-normal (0, 0.50 ²) Prior
PEI	RFA	1.36 (1.11, 1.67)	1.40 (1.04, 2.02)	1.42 (0.94, 2.40)
PAI	RFA	1.63 (1.05, 2.51)	1.64 (0.98, 2.78)	1.65 (0.86, 3.26)
Resection	RFA	1.01 (0.80, 1.28)	1.02 (0.75, 1.40)	1.02 (0.69, 1.55)
RFA + TACE	RFA	0.80 (0.44, 1.44)	0.80 (0.41, 1.55)	0.80 (0.36, 1.76)
PAI	PEI	1.19 (0.80, 1.78)	1.17 (0.70, 1.90)	1.16 (0.59, 2.15)
Resection	PEI	0.74 (0.55, 1.01)	0.72 (0.45, 1.11)	0.72 (0.37, 1.27)
RFA + TACE	PEI	0.58 (0.31, 1.09)	0.57 (0.27, 1.17)	0.56 (0.21, 1.34)
Resection	PAI	0.62 (0.38, 1.02)	0.62 (0.34, 1.14)	0.62 (0.28, 1.34)
RFA + TACE	PAI	0.49 (0.23, 1.02)	0.48 (0.21, 1.13)	0.48 (0.17, 1.34)
RFA + TACE	Resection	0.79 (0.42, 1.49)	0.78 (0.37, 1.63)	0.78 (0.32, 1.87)

HRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible intervals, FE: fixed-effect, RE: random-effect

Overall recurrence

Figure 6: Density plots for between-study standard deviation (SD) for overall recurrence

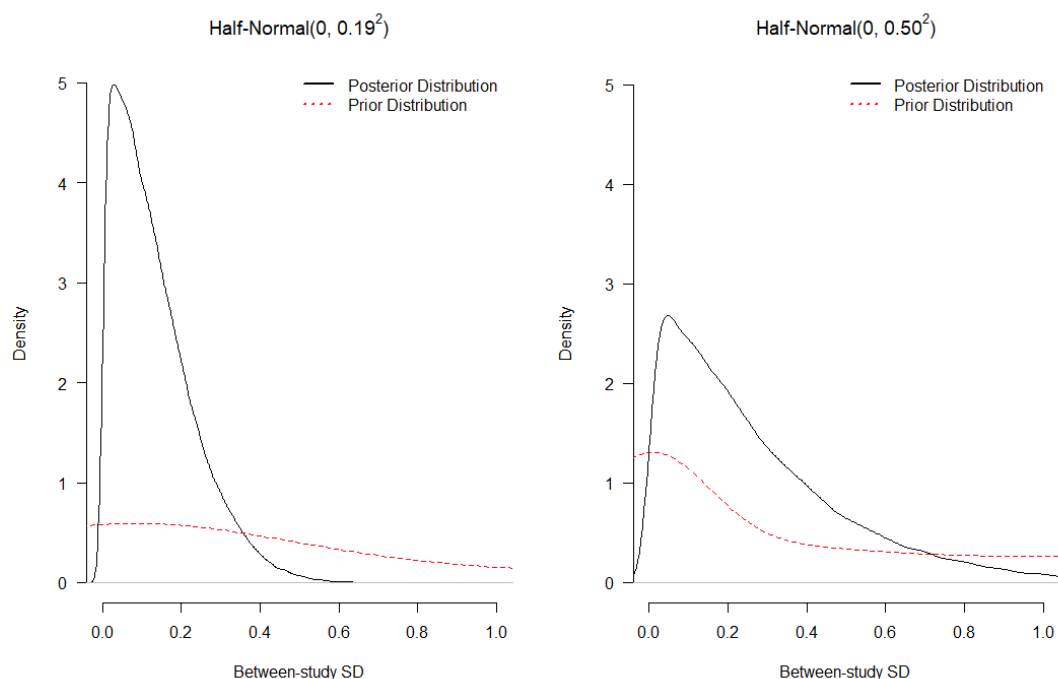


Table 8: Relative Risks (RRs) for overall recurrence for the fixed- and random-effects models

Comparator	Baseline Intervention	Relative Risks (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.19 (1.02, 1.39)	1.19 (0.84, 1.66)	1.19 (0.60, 2.32)
Resection	RFA	0.97 (0.68, 1.39)	0.97 (0.62, 1.51)	0.97 (0.47, 1.97)
TACE + PEI	RFA	1.41 (0.91, 2.18)	1.41 (0.76, 2.60)	1.40 (0.47, 4.15)
RFA + Iodine-125	RFA	0.69 (0.48, 0.99)	0.69 (0.42, 1.13)	0.69 (0.30, 1.62)
MWA + Sorafenib	RFA	2.03 (0.99, 4.17)	2.01 (0.88, 4.70)	2.03 (0.61, 6.66)
RFA + Systemic chemotherapy	RFA	0.53 (0.19, 1.48)	0.53 (0.18, 1.54)	0.53 (0.15, 1.87)
Resection	PEI	0.82 (0.57, 1.17)	0.82 (0.52, 1.28)	0.82 (0.40, 1.68)
TACE + PEI	PEI	1.18 (0.79, 1.77)	1.19 (0.71, 1.99)	1.18 (0.50, 2.80)
RFA + Iodine-125	PEI	0.58 (0.39, 0.86)	0.58 (0.32, 1.06)	0.58 (0.20, 1.74)
MWA + Sorafenib	PEI	1.70 (0.83, 3.50)	1.70 (0.74, 3.96)	1.71 (0.51, 5.64)
RFA + Systemic chemotherapy	PEI	0.45 (0.16, 1.26)	0.45 (0.15, 1.36)	0.45 (0.11, 1.84)
TACE + PEI	Resection	1.45 (0.84, 2.49)	1.45 (0.73, 2.89)	1.45 (0.47, 4.44)
RFA + Iodine-125	Resection	0.71 (0.43, 1.19)	0.71 (0.37, 1.39)	0.71 (0.24, 2.17)
MWA + Sorafenib	Resection	2.09 (1.12, 3.89)	2.08 (1.03, 4.23)	2.09 (0.80, 5.45)
RFA + Systemic chemotherapy	Resection	0.55 (0.19, 1.62)	0.55 (0.17, 1.74)	0.55 (0.13, 2.32)
RFA + Iodine-125	TACE + PEI	0.49 (0.28, 0.86)	0.49 (0.22, 1.08)	0.49 (0.12, 1.97)
MWA + Sorafenib	TACE + PEI	1.44 (0.63, 3.29)	1.43 (0.53, 3.84)	1.45 (0.33, 6.29)
RFA + Systemic chemotherapy	TACE + PEI	0.38 (0.13, 1.15)	0.38 (0.11, 1.29)	0.38 (0.08, 1.97)
MWA + Sorafenib	RFA + Iodine-125	2.93 (1.31, 6.56)	2.91 (1.11, 7.70)	2.92 (0.67, 12.61)
RFA + Systemic chemotherapy	RFA + Iodine-125	0.77 (0.26, 2.28)	0.76 (0.24, 2.46)	0.77 (0.17, 3.42)
RFA + Systemic chemotherapy	MWA + Sorafenib	0.26 (0.08, 0.92)	0.26 (0.07, 1.01)	0.26 (0.05, 1.47)

RRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible interval, FE: fixed-effect, RE: random-effect

Local recurrence

Figure 7: Density plots for between-study standard deviation (SD) for local recurrence

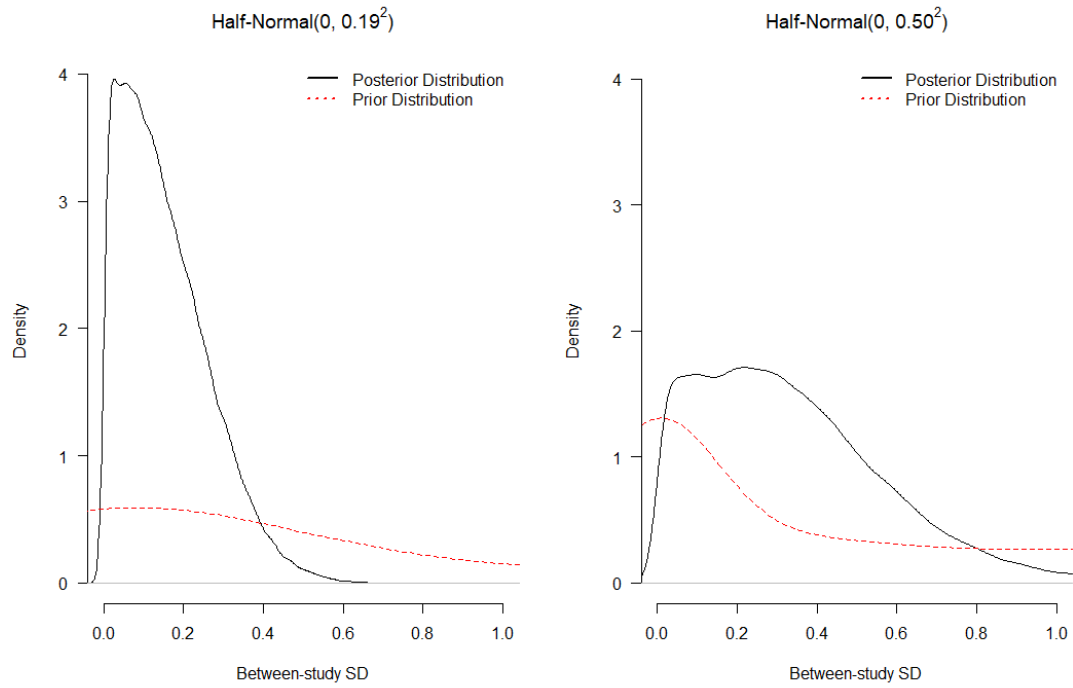


Table 9: Relative risks (RR) for local recurrence for the fixed- and random-effects models

Comparator	Baseline Intervention	Relative Risks (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.80 (1.19, 2.71)	1.84 (1.18, 2.93)	1.90 (1.09, 3.62)
PAI	RFA	1.70 (0.93, 3.10)	1.74 (0.88, 3.59)	1.80 (0.71, 4.96)
MWA	RFA	1.62 (0.66, 3.95)	1.63 (0.61, 4.33)	1.61 (0.48, 5.49)
TACE + PEI	RFA	0.65 (0.22, 1.95)	0.67 (0.21, 2.19)	0.69 (0.17, 3.00)
RFA + TACE	RFA	1.21 (0.51, 2.87)	1.21 (0.49, 3.04)	1.20 (0.41, 3.45)
Laser ablation	RFA	2.99 (0.72, 12.52)	2.99 (0.69, 12.92)	3.03 (0.58, 15.24)
RFA + PEI	RFA	0.60 (0.23, 1.56)	0.60 (0.21, 1.68)	0.60 (0.17, 2.11)
High dose PEI	RFA	1.62 (0.74, 3.53)	1.64 (0.70, 3.90)	1.68 (0.59, 5.14)
PAI	PEI	0.94 (0.56, 1.60)	0.95 (0.50, 1.81)	0.95 (0.37, 2.38)
MWA	PEI	0.90 (0.34, 2.41)	0.89 (0.30, 2.58)	0.84 (0.21, 3.19)
TACE + PEI	PEI	0.36 (0.13, 1.01)	0.37 (0.12, 1.08)	0.36 (0.10, 1.33)
RFA + TACE	PEI	0.67 (0.26, 1.75)	0.66 (0.24, 1.80)	0.63 (0.18, 2.05)
Laser ablation	PEI	1.66 (0.38, 7.36)	1.62 (0.35, 7.54)	1.58 (0.27, 8.67)
RFA + PEI	PEI	0.33 (0.12, 0.94)	0.33 (0.11, 1.00)	0.32 (0.08, 1.22)
High dose PEI	PEI	0.90 (0.43, 1.88)	0.90 (0.39, 2.00)	0.88 (0.31, 2.47)
MWA	PAI	0.96 (0.32, 2.79)	0.94 (0.28, 3.08)	0.89 (0.18, 4.11)
TACE + PEI	PAI	0.39 (0.12, 1.21)	0.39 (0.11, 1.36)	0.38 (0.08, 1.90)
RFA + TACE	PAI	0.71 (0.25, 2.05)	0.70 (0.22, 2.16)	0.67 (0.15, 2.68)
Laser ablation	PAI	1.77 (0.37, 8.29)	1.72 (0.33, 8.86)	1.68 (0.24, 10.68)
RFA + PEI	PAI	0.35 (0.11, 1.10)	0.34 (0.10, 1.20)	0.33 (0.07, 1.57)
High dose PEI	PAI	0.95 (0.39, 2.33)	0.95 (0.34, 2.60)	0.94 (0.24, 3.59)
TACE + PEI	MWA	0.40 (0.10, 1.65)	0.41 (0.09, 1.91)	0.43 (0.07, 2.89)
RFA + TACE	MWA	0.75 (0.22, 2.59)	0.74 (0.20, 2.85)	0.75 (0.15, 3.70)
Laser ablation	MWA	1.85 (0.34, 10.04)	1.84 (0.32, 10.77)	1.88 (0.24, 14.28)
RFA + PEI	MWA	0.37 (0.10, 1.37)	0.37 (0.09, 1.51)	0.37 (0.06, 2.17)
High dose PEI	MWA	1.00 (0.30, 3.28)	1.01 (0.28, 3.75)	1.05 (0.21, 5.49)
RFA + TACE	TACE + PEI	1.85 (0.46, 7.45)	1.80 (0.41, 8.00)	1.74 (0.28, 9.82)
Laser ablation	TACE + PEI	4.58 (0.76, 27.67)	4.47 (0.67, 30.15)	4.35 (0.47, 36.75)
RFA + PEI	TACE + PEI	0.92 (0.21, 3.92)	0.89 (0.19, 4.25)	0.87 (0.12, 5.61)
High dose PEI	TACE + PEI	2.47 (0.70, 8.68)	2.46 (0.62, 9.60)	2.44 (0.45, 12.79)
Laser ablation	RFA + TACE	2.47 (0.46, 13.18)	2.47 (0.44, 13.91)	2.50 (0.36, 17.69)
RFA + PEI	RFA + TACE	0.50 (0.14, 1.79)	0.50 (0.13, 1.95)	0.50 (0.10, 2.63)
High dose PEI	RFA + TACE	1.34 (0.42, 4.26)	1.36 (0.39, 4.78)	1.40 (0.32, 6.62)
RFA + PEI	Laser ablation	0.20 (0.04, 1.12)	0.20 (0.03, 1.21)	0.20 (0.03, 1.57)
High dose PEI	Laser ablation	0.54 (0.11, 2.75)	0.55 (0.10, 3.01)	0.56 (0.08, 4.11)
High dose PEI	RFA + PEI	2.70 (0.78, 9.27)	2.75 (0.73, 10.35)	2.79 (0.55, 15.16)

RRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: FE: fixed-effect, RE: random-effects, RR: relative risks

NMAs of RCT and non-RCT evidence

Overall survival

Figure 8: Density plots for between-study standard deviation (SD) for overall survival for the updated NMA

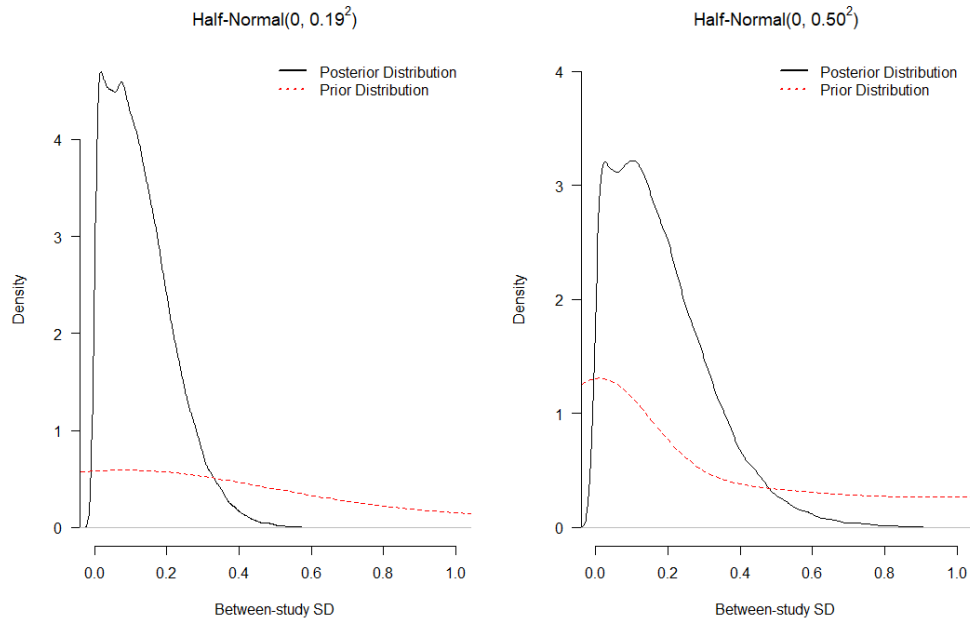


Table 10: Hazard Ratios (HRs) for overall survival for fixed and random-effects models

Comparator	Baseline Intervention	Hazard Ratios (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.45 (1.16, 1.82)	1.45 (1.10, 1.91)	1.45 (1.04, 2.00)
PAI	RFA	1.81 (0.96, 3.37)	1.81 (0.91, 3.58)	1.79 (0.86, 3.77)
Resection	RFA	0.94 (0.69, 1.29)	0.92 (0.65, 1.30)	0.92 (0.61, 1.31)
MWA	RFA	0.87 (0.62, 1.23)	0.87 (0.58, 1.34)	0.88 (0.54, 1.44)
TACE + PEI	RFA	1.02 (0.40, 2.59)	1.02 (0.37, 2.72)	1.02 (0.35, 2.95)
TACE + PAI	RFA	1.88 (0.73, 4.83)	1.88 (0.68, 5.22)	1.88 (0.60, 5.69)
RFA + TACE	RFA	1.15 (0.70, 1.91)	1.11 (0.63, 1.91)	1.09 (0.57, 1.95)
RFA + Iodine-125	RFA	0.50 (0.31, 0.80)	0.50 (0.29, 0.88)	0.50 (0.26, 0.97)
RFA + PEI	RFA	0.90 (0.29, 2.79)	0.91 (0.28, 2.85)	0.88 (0.26, 3.06)
Laser	RFA	1.46 (0.82, 2.59)	1.45 (0.77, 2.79)	1.46 (0.71, 3.02)
IRE	RFA	1.05 (0.46, 2.40)	1.06 (0.45, 2.50)	1.05 (0.42, 2.70)
PAI	PEI	1.24 (0.69, 2.23)	1.24 (0.65, 2.38)	1.24 (0.61, 2.54)
Resection	PEI	0.65 (0.44, 0.95)	0.64 (0.41, 0.98)	0.63 (0.37, 1.02)
MWA	PEI	0.60 (0.40, 0.90)	0.60 (0.37, 1.00)	0.61 (0.34, 1.10)
TACE + PEI	PEI	0.70 (0.28, 1.73)	0.70 (0.26, 1.79)	0.70 (0.25, 1.98)
TACE + PAI	PEI	1.29 (0.52, 3.23)	1.29 (0.48, 3.54)	1.30 (0.43, 3.86)
RFA + TACE	PEI	0.79 (0.46, 1.38)	0.77 (0.41, 1.41)	0.76 (0.37, 1.45)
RFA + Iodine-125	PEI	0.35 (0.20, 0.58)	0.35 (0.19, 0.65)	0.35 (0.17, 0.72)
RFA + PEI	PEI	0.62 (0.19, 1.96)	0.62 (0.19, 2.03)	0.61 (0.17, 2.20)
Laser	PEI	1.00 (0.54, 1.86)	1.00 (0.50, 2.04)	1.01 (0.46, 2.24)
IRE	PEI	0.72 (0.31, 1.70)	0.73 (0.30, 1.80)	0.73 (0.27, 1.98)
Resection	PAI	0.52 (0.26, 1.05)	0.51 (0.24, 1.09)	0.51 (0.22, 1.14)
MWA	PAI	0.48 (0.24, 0.99)	0.48 (0.22, 1.08)	0.49 (0.20, 1.20)
TACE + PEI	PAI	0.57 (0.19, 1.66)	0.56 (0.17, 1.75)	0.56 (0.16, 1.95)
TACE + PAI	PAI	1.04 (0.51, 2.10)	1.04 (0.49, 2.24)	1.05 (0.45, 2.40)
RFA + TACE	PAI	0.64 (0.29, 1.43)	0.61 (0.25, 1.48)	0.61 (0.23, 1.52)

RFA + Iodine-125	PAI	0.28 (0.13, 0.61)	0.28 (0.11, 0.67)	0.28 (0.10, 0.75)
RFA + PEI	PAI	0.50 (0.14, 1.82)	0.51 (0.13, 1.92)	0.49 (0.12, 2.07)
Laser	PAI	0.81 (0.35, 1.90)	0.81 (0.32, 2.06)	0.81 (0.29, 2.29)
IRE	PAI	0.58 (0.21, 1.65)	0.58 (0.20, 1.77)	0.58 (0.18, 1.98)
MWA	Resection	0.93 (0.58, 1.47)	0.95 (0.56, 1.67)	0.96 (0.53, 1.85)
TACE + PEI	Resection	1.08 (0.41, 2.90)	1.10 (0.38, 3.14)	1.11 (0.36, 3.53)
TACE + PAI	Resection	1.99 (0.74, 5.39)	2.04 (0.71, 6.00)	2.05 (0.63, 6.75)
RFA + TACE	Resection	1.22 (0.77, 1.94)	1.21 (0.71, 2.00)	1.20 (0.67, 2.09)
RFA + Iodine-125	Resection	0.53 (0.30, 0.94)	0.54 (0.28, 1.06)	0.55 (0.26, 1.20)
RFA + PEI	Resection	0.96 (0.30, 3.08)	0.99 (0.29, 3.24)	0.97 (0.27, 3.59)
Laser	Resection	1.55 (0.81, 2.98)	1.58 (0.76, 3.33)	1.59 (0.72, 3.72)
IRE	Resection	1.11 (0.46, 2.69)	1.14 (0.46, 2.92)	1.15 (0.43, 3.24)
TACE + PEI	MWA	1.17 (0.43, 3.16)	1.15 (0.39, 3.38)	1.16 (0.35, 3.72)
TACE + PAI	MWA	2.15 (0.79, 5.87)	2.15 (0.71, 6.50)	2.14 (0.61, 7.17)
RFA + TACE	MWA	1.32 (0.72, 2.43)	1.27 (0.62, 2.51)	1.25 (0.54, 2.64)
RFA + Iodine-125	MWA	0.58 (0.32, 1.03)	0.57 (0.28, 1.15)	0.58 (0.25, 1.28)
RFA + PEI	MWA	1.03 (0.32, 3.37)	1.04 (0.30, 3.51)	1.01 (0.27, 3.83)
Laser	MWA	1.67 (0.86, 3.27)	1.67 (0.76, 3.60)	1.67 (0.69, 3.97)
IRE	MWA	1.20 (0.51, 2.81)	1.21 (0.50, 2.93)	1.20 (0.47, 3.12)
TACE + PAI	TACE + PEI	1.84 (0.51, 6.68)	1.85 (0.47, 7.45)	1.85 (0.42, 8.30)
RFA + TACE	TACE + PEI	1.13 (0.39, 3.25)	1.09 (0.35, 3.44)	1.07 (0.31, 3.59)
RFA + Iodine-125	TACE + PEI	0.49 (0.17, 1.40)	0.49 (0.16, 1.57)	0.50 (0.14, 1.74)
RFA + PEI	TACE + PEI	0.88 (0.20, 3.82)	0.89 (0.20, 4.16)	0.87 (0.17, 4.51)
Laser	TACE + PEI	1.43 (0.48, 4.27)	1.44 (0.44, 4.79)	1.43 (0.39, 5.26)
IRE	TACE + PEI	1.02 (0.30, 3.57)	1.04 (0.28, 3.98)	1.05 (0.25, 4.36)
RFA + TACE	TACE + PAI	0.61 (0.21, 1.80)	0.59 (0.18, 1.86)	0.58 (0.16, 2.06)
RFA + Iodine-125	TACE + PAI	0.27 (0.09, 0.77)	0.27 (0.08, 0.86)	0.27 (0.07, 0.99)
RFA + PEI	TACE + PAI	0.48 (0.11, 2.10)	0.48 (0.10, 2.24)	0.47 (0.09, 2.55)
Laser	TACE + PAI	0.78 (0.26, 2.36)	0.77 (0.23, 2.58)	0.78 (0.20, 3.00)
IRE	TACE + PAI	0.56 (0.16, 1.96)	0.56 (0.15, 2.17)	0.56 (0.13, 2.49)
RFA + Iodine-125	RFA + TACE	0.44 (0.22, 0.87)	0.45 (0.21, 1.01)	0.46 (0.20, 1.17)
RFA + PEI	RFA + TACE	0.78 (0.22, 2.69)	0.82 (0.23, 2.99)	0.82 (0.21, 3.26)
Laser	RFA + TACE	1.26 (0.59, 2.72)	1.31 (0.57, 3.13)	1.33 (0.54, 3.57)
IRE	RFA + TACE	0.91 (0.34, 2.39)	0.95 (0.35, 2.67)	0.97 (0.33, 3.01)
RFA + PEI	RFA + Iodine-125	1.79 (0.53, 6.13)	1.82 (0.49, 6.43)	1.75 (0.44, 7.08)
Laser	RFA + Iodine-125	2.91 (1.38, 6.12)	2.91 (1.24, 6.86)	2.90 (1.09, 7.68)
IRE	RFA + Iodine-125	2.09 (0.80, 5.42)	2.12 (0.75, 5.98)	2.09 (0.67, 6.61)
Laser	RFA + PEI	1.62 (0.45, 5.76)	1.61 (0.43, 6.05)	1.66 (0.40, 6.83)
IRE	RFA + PEI	1.16 (0.29, 4.74)	1.17 (0.28, 5.02)	1.20 (0.25, 5.62)
IRE	Laser	0.72 (0.26, 1.97)	0.73 (0.24, 2.16)	0.72 (0.22, 2.37)

HRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible interval, FE: fixed-effect, RE: random-effect

Progression-free survival

Figure 9: Density plots for between-study standard deviation (SD) for progression-free survival for the updated NMA

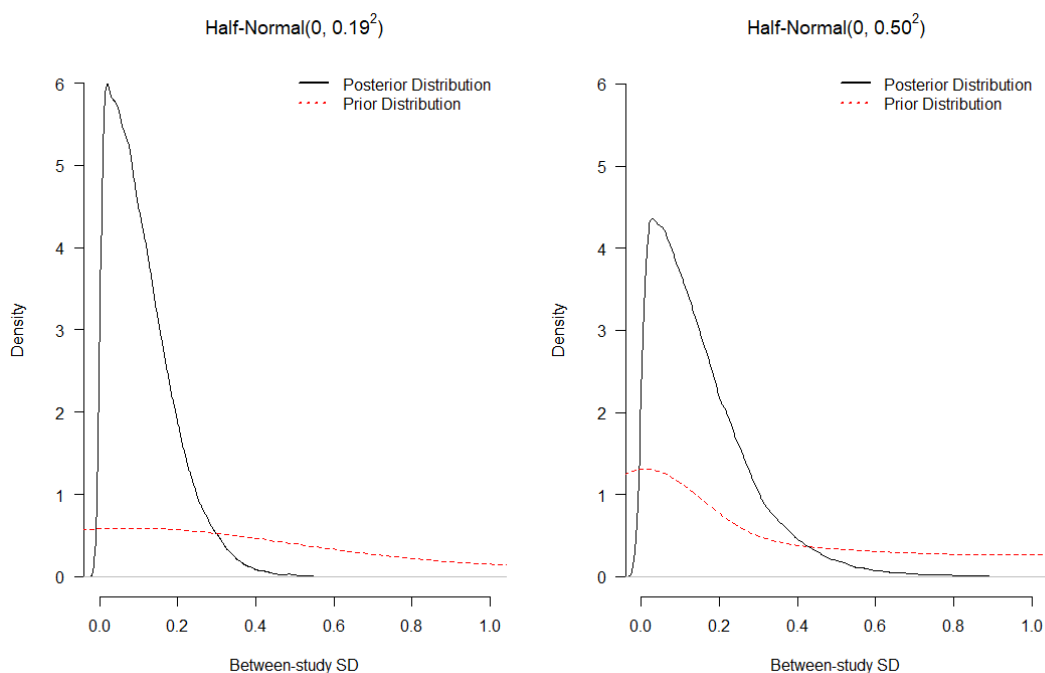


Table 11: Hazard Ratios (HRs) for progression-free survival for the fixed- and random-effects models

Comparator	Baseline Intervention	Hazard Ratios (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.36 (1.11, 1.67)	1.39 (1.06, 1.94)	1.41 (1.01, 2.16)
PAI	RFA	1.63 (1.05, 2.51)	1.64 (0.99, 2.74)	1.65 (0.94, 2.94)
Resection	RFA	0.99 (0.80, 1.21)	0.99 (0.77, 1.27)	0.99 (0.74, 1.33)
RFA + TACE	RFA	0.80 (0.44, 1.44)	0.79 (0.41, 1.53)	0.80 (0.39, 1.63)
MWA	RFA	0.90 (0.67, 1.21)	0.90 (0.61, 1.33)	0.91 (0.58, 1.46)
IRE	RFA	1.11 (0.56, 2.20)	1.12 (0.54, 2.33)	1.12 (0.51, 2.45)
PAI	PEI	1.19 (0.80, 1.78)	1.17 (0.72, 1.89)	1.17 (0.66, 1.98)
Resection	PEI	0.72 (0.54, 0.96)	0.71 (0.47, 1.03)	0.70 (0.42, 1.09)
RFA + TACE	PEI	0.58 (0.31, 1.09)	0.57 (0.27, 1.15)	0.56 (0.25, 1.23)
MWA	PEI	0.66 (0.46, 0.95)	0.65 (0.39, 1.04)	0.64 (0.34, 1.13)
IRE	PEI	0.82 (0.40, 1.67)	0.80 (0.36, 1.75)	0.79 (0.33, 1.84)
Resection	PAI	0.61 (0.38, 0.98)	0.60 (0.34, 1.05)	0.60 (0.32, 1.13)
RFA + TACE	PAI	0.49 (0.24, 1.02)	0.48 (0.21, 1.11)	0.48 (0.19, 1.19)
MWA	PAI	0.55 (0.33, 0.94)	0.55 (0.29, 1.03)	0.55 (0.26, 1.15)
IRE	PAI	0.68 (0.30, 1.54)	0.68 (0.28, 1.65)	0.68 (0.26, 1.78)
RFA + TACE	Resection	0.81 (0.43, 1.51)	0.80 (0.40, 1.62)	0.80 (0.37, 1.74)
MWA	Resection	0.91 (0.64, 1.31)	0.91 (0.58, 1.45)	0.92 (0.53, 1.60)
IRE	Resection	1.13 (0.55, 2.30)	1.13 (0.52, 2.46)	1.13 (0.49, 2.59)
MWA	RFA + TACE	1.13 (0.58, 2.20)	1.14 (0.53, 2.43)	1.14 (0.48, 2.68)
IRE	RFA + TACE	1.40 (0.57, 3.45)	1.42 (0.53, 3.76)	1.40 (0.49, 4.13)
IRE	MWA	1.23 (0.62, 2.46)	1.24 (0.59, 2.61)	1.23 (0.56, 2.71)

HRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible interval, FE: fixed-effect, RE: random-effect

Local recurrence

Figure 10: Density plots for between-study standard deviation (SD) for local recurrence for the updated NMA

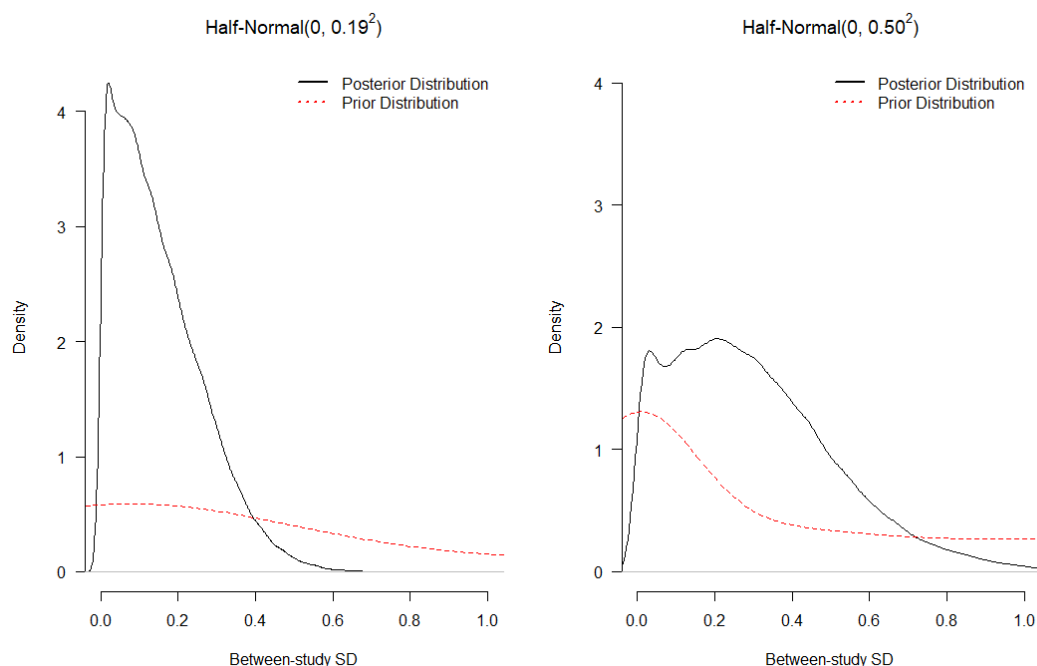


Table 12: Relative risks (RR) for local recurrence for the fixed- and random-effects models

Comparator	Baseline Intervention	Relative Risk (95% CrI)		
		FE Model	RE Models	
			Half-normal (0, 0.19 ²) prior	Half-normal (0, 0.50 ²) prior
PEI	RFA	1.80 (1.20, 2.71)	1.84 (1.17, 2.95)	1.88 (1.11, 3.49)
PAI	RFA	1.70 (0.93, 3.10)	1.73 (0.87, 3.57)	1.78 (0.74, 4.65)
MWA	RFA	1.10 (0.69, 1.75)	1.11 (0.65, 1.95)	1.14 (0.57, 2.44)
TACE + PEI	RFA	0.66 (0.22, 1.95)	0.68 (0.21, 2.21)	0.68 (0.18, 2.82)
RFA + TACE	RFA	1.21 (0.51, 2.88)	1.22 (0.48, 3.00)	1.22 (0.43, 3.41)
Laser ablation	RFA	3.00 (0.72, 12.50)	3.07 (0.70, 12.98)	2.98 (0.61, 14.77)
RFA + PEI	RFA	0.60 (0.23, 1.56)	0.61 (0.22, 1.70)	0.60 (0.18, 2.02)
High dose PEI	RFA	1.62 (0.74, 3.52)	1.65 (0.71, 3.92)	1.66 (0.61, 4.84)
IRE	RFA	2.97 (1.45, 6.09)	2.98 (1.33, 6.60)	2.96 (1.09, 8.06)
PAI	PEI	0.94 (0.56, 1.60)	0.94 (0.50, 1.78)	0.94 (0.39, 2.25)
MWA	PEI	0.61 (0.33, 1.14)	0.61 (0.30, 1.23)	0.61 (0.24, 1.49)
TACE + PEI	PEI	0.36 (0.13, 1.00)	0.37 (0.12, 1.07)	0.36 (0.10, 1.28)
RFA + TACE	PEI	0.67 (0.26, 1.76)	0.66 (0.23, 1.82)	0.64 (0.19, 2.05)
Laser ablation	PEI	1.67 (0.38, 7.34)	1.65 (0.35, 7.58)	1.58 (0.28, 8.37)
RFA + PEI	PEI	0.33 (0.12, 0.94)	0.33 (0.11, 1.00)	0.32 (0.08, 1.17)
High dose PEI	PEI	0.90 (0.43, 1.87)	0.90 (0.40, 2.03)	0.88 (0.32, 2.37)
IRE	PEI	1.65 (0.72, 3.77)	1.61 (0.63, 3.97)	1.57 (0.48, 4.80)
MWA	PAI	0.65 (0.30, 1.39)	0.64 (0.26, 1.55)	0.64 (0.20, 2.03)
TACE + PEI	PAI	0.39 (0.12, 1.21)	0.39 (0.11, 1.34)	0.38 (0.08, 1.76)
RFA + TACE	PAI	0.71 (0.25, 2.05)	0.70 (0.22, 2.21)	0.68 (0.16, 2.62)
Laser ablation	PAI	1.77 (0.38, 8.31)	1.76 (0.34, 8.80)	1.67 (0.26, 10.26)
RFA + PEI	PAI	0.35 (0.11, 1.10)	0.35 (0.10, 1.19)	0.33 (0.07, 1.49)
High dose PEI	PAI	0.95 (0.39, 2.33)	0.95 (0.34, 2.65)	0.93 (0.26, 3.35)
IRE	PAI	1.75 (0.69, 4.48)	1.72 (0.58, 4.87)	1.67 (0.41, 6.23)

TACE + PEI	MWA	0.60 (0.18, 1.96)	0.61 (0.16, 2.21)	0.60 (0.13, 2.90)
RFA + TACE	MWA	1.10 (0.41, 2.95)	1.09 (0.37, 3.12)	1.06 (0.29, 3.63)
Laser ablation	MWA	2.73 (0.61, 12.25)	2.74 (0.56, 13.12)	2.61 (0.45, 14.86)
RFA + PEI	MWA	0.55 (0.19, 1.58)	0.54 (0.17, 1.73)	0.52 (0.13, 2.09)
High dose PEI	MWA	1.47 (0.59, 3.65)	1.48 (0.54, 4.05)	1.46 (0.41, 5.22)
IRE	MWA	2.71 (1.55, 4.72)	2.67 (1.34, 5.11)	2.60 (1.01, 6.29)
RFA + TACE	TACE + PEI	1.85 (0.46, 7.45)	1.80 (0.40, 7.98)	1.77 (0.31, 9.78)
Laser ablation	TACE + PEI	4.58 (0.76, 27.51)	4.49 (0.67, 29.46)	4.33 (0.51, 35.30)
RFA + PEI	TACE + PEI	0.92 (0.22, 3.93)	0.89 (0.19, 4.27)	0.87 (0.14, 5.32)
High dose PEI	TACE + PEI	2.47 (0.71, 8.63)	2.46 (0.63, 9.42)	2.44 (0.48, 11.93)
IRE	TACE + PEI	4.54 (1.23, 16.85)	4.39 (1.05, 18.25)	4.34 (0.75, 22.76)
Laser ablation	RFA + TACE	2.48 (0.47, 13.04)	2.51 (0.44, 14.25)	2.46 (0.37, 16.56)
RFA + PEI	RFA + TACE	0.50 (0.14, 1.79)	0.50 (0.12, 1.99)	0.49 (0.10, 2.47)
High dose PEI	RFA + TACE	1.34 (0.42, 4.28)	1.36 (0.39, 4.78)	1.37 (0.32, 6.14)
IRE	RFA + TACE	2.45 (0.79, 7.52)	2.46 (0.73, 8.16)	2.43 (0.58, 10.33)
RFA + PEI	Laser	0.20 (0.04, 1.12)	0.20 (0.03, 1.21)	0.20 (0.03, 1.48)
High dose PEI	Laser	0.54 (0.11, 2.75)	0.54 (0.10, 3.07)	0.56 (0.09, 3.80)
IRE	Laser	0.99 (0.20, 4.90)	0.97 (0.18, 5.19)	0.99 (0.15, 6.54)
High dose PEI	RFA + PEI	2.70 (0.78, 9.23)	2.72 (0.72, 10.56)	2.78 (0.58, 14.02)
IRE	RFA + PEI	4.96 (1.50, 16.36)	4.89 (1.35, 17.94)	4.95 (1.02, 23.76)
IRE	High dose PEI	1.83 (0.64, 5.32)	1.80 (0.56, 5.74)	1.78 (0.41, 7.34)

RRs less than one favour the comparator treatment. **Treatment comparisons in bold do not include the “null” effect**

Abbreviations: CrI: credible interval, FE: fixed-effect, RE: random-effect

5.4: Threshold analysis

NMAs of RCTs

Overall survival

Table 13: Thresholds for overall survival

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnHR	New Optimal Treatment	Change in lnHR
PEI	RFA	MWA	-73.54	Resection	49.88
PAI	RFA	MWA	-25408.10	Laser	39796.39
Resection	RFA	Resection	-0.64	Laser	346.50
MWA	RFA	MWA	-0.62	N/A	Inf
RFA + TACE	RFA	RFA + TACE	-2.06	RFA	742.00
RFA + Iodine-125	RFA	N/A	-Inf	Resection	0.55
RFA + PEI	RFA	MWA	-194.31	N/A	Inf
Laser	RFA	Laser	-1.07	Resection	640.87
PAI	PEI	MWA	-287.09	Laser	350.53
TACE + PEI	PEI	Laser	-1333.69	MWA	257.01
TACE + PAI	PAI	RFA + TACE	-372.75	Laser	1581.73
RFA + TACE	Resection	RFA + TACE	-1.25	Resection	4.02

Abbreviations: Inf: Infinity, N/A: Not Applicable

Progression-free survival

Table 14: Thresholds for PFS

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnHR	New Optimal Treatment	Change in lnHR
PEI	RFA	RFA	-31.94	N/A	Inf
PAI	RFA	RFA	-308.06	N/A	Inf
Resection	RFA	Resection	-0.24	RFA	63.05
RFA + TACE	RFA	N/A	-Inf	RFA	0.29
PAI	PEI	RFA	-75.93	N/A	Inf

Abbreviations: Inf: Infinity, N/A: Not Applicable

Overall recurrence

Table 15: Thresholds for overall recurrence

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnRR	New Optimal Treatment	Change in lnRR
PEI	RFA	Resection	-1.37	N/A	Inf
Resection	RFA	Resection	-1.08	RFA + Iodine-125	56.69
RFA + Iodine-125	RFA	RFA + Iodine-125	-0.26	Resection	53.51
RFA + Systemic Chemotherapy	RFA	N/A	-Inf	RFA + Iodine-125	0.26
Resection	PEI	Resection	-1.39	RFA + Iodine-125	57.64
TACE + PEI	PEI	RFA + Iodine-125	-34.20	N/A	Inf
MWA + Sorafenib	Resection	MWA + Sorafenib	-1.34	Resection	363.74

Abbreviations: Inf: Infinity, N/A: Not Applicable

Local recurrence

Table 16: Thresholds for local recurrence

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnRR	New Optimal Treatment	Change in lnRR
PEI	RFA	RFA + TACE	-43.17	N/A	Inf
PAI	RFA	RFA + TACE	-183.41	Laser	629.28
MWA	RFA	MWA	-0.48	N/A	Inf
RFA + TACE	RFA	RFA + TACE	-0.19	Laser	2943.57
Laser	RFA	Laser	-1.10	RFA + TACE	1416.07
RFA + PEI	RFA	RFA + TACE	-661.27	MWA	1062.03
High-dose PEI	RFA	RFA + TACE	-250.76	Laser	8890.38
PAI	PEI	RFA + TACE	-275.61	Laser	166.36
TACE + PEI	PEI	MWA	-437.77	RFA + TACE	194.61
High-dose PEI	PEI	RFA + TACE	-309.79	Laser	1288.40

Abbreviations: Inf: Infinity, N/A: Not Applicable

NMAs of RCT and non-RCT evidence

Overall survival

Table 17: Thresholds for overall survival for the updated NMA

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnHR	New Optimal Treatment	Change in lnHR
PEI	RFA	MWA	-55.26	N/A	Inf
PAI	RFA	MWA	-26669.9	N/A	Inf
Resection	RFA	Resection	-0.69	N/A	Inf
MWA	RFA	MWA	-0.57	Laser	2251.48
RFA + TACE	RFA	RFA + TACE	-2.37	N/A	Inf
RFA + Iodine-125	RFA	N/A	-Inf	MWA	0.55
RFA + PEI	RFA	MWA	-323.49	IRE	841.32
Laser	RFA	Laser	-1.07	IRE	314.03
IRE	RFA	IRE	-1.12	Laser	1049.51
PAI	PEI	MWA	-210.18	RFA + TACE	10548.17
TACE + PEI	PEI	N/A	-Inf	MWA	367.33
TACE + PAI	PAI	N/A	-Inf	IRE	242.94
RFA + TACE	Resection	RFA + TACE	-1.28	Resection	6.61
IRE	MWA	IRE	-2.14	MWA	13.61

Abbreviations: Inf: Infinity, N/A: Not Applicable

Progression-free survival

Table 18: Thresholds for PFS for the updated NMA

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnHR	New Optimal Treatment	Change in lnHR
PEI	RFA	Resection	-29.89	N/A	Inf
PAI	RFA	Resection	-352.39	N/A	Inf
Resection	RFA	Resection	-0.21	RFA	54.80
RFA + TACE	RFA	N/A	-Inf	MWA	0.12
MWA	RFA	MWA	-0.13	N/A	Inf
IRE	RFA	IRE	-0.58	N/A	Inf
PAI	PEI	Resection	-101.30	IRE	371.96
IRE	MWA	IRE	-0.79	MWA	2.61

Abbreviations: Inf: Infinity, N/A: Not Applicable

Local recurrence

Table 19: Thresholds for local recurrence for the updated NMA

Comparator	Baseline	Lower Threshold		Upper Threshold	
		New Optimal Treatment	Change in lnRR	New Optimal Treatment	Change in lnRR
PEI	RFA	IRE	-677.61	RFA + TACE	86.24
PAI	RFA	MWA	-397.49	Laser	548.98
MWA	RFA	MWA	-0.09	NA	Inf
RFA + TACE	RFA	RFA + TACE	-0.19	Laser	416.35
Laser	RFA	Laser	-1.10	RFA + TACE	199.02
RFA + PEI	RFA	RFA + TACE	-444.24	Laser	187.19
High-dose PEI	RFA	RFA + TACE	-124.15	MWA	214.82
IRE	RFA	MWA	-4.76	NA	Inf
PAI	PEI	RFA + TACE	-91.02	Laser	345.65
TACE + PEI	PEI	Laser	-577.91	MWA	248.35
High-dose PEI	PEI	RFA + TACE	-46.04	MWA	91.00
IRE	MWA	IRE	-1.14	MWA	4.76

Abbreviations: Inf: Infinity, N/A: Not Applicable

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