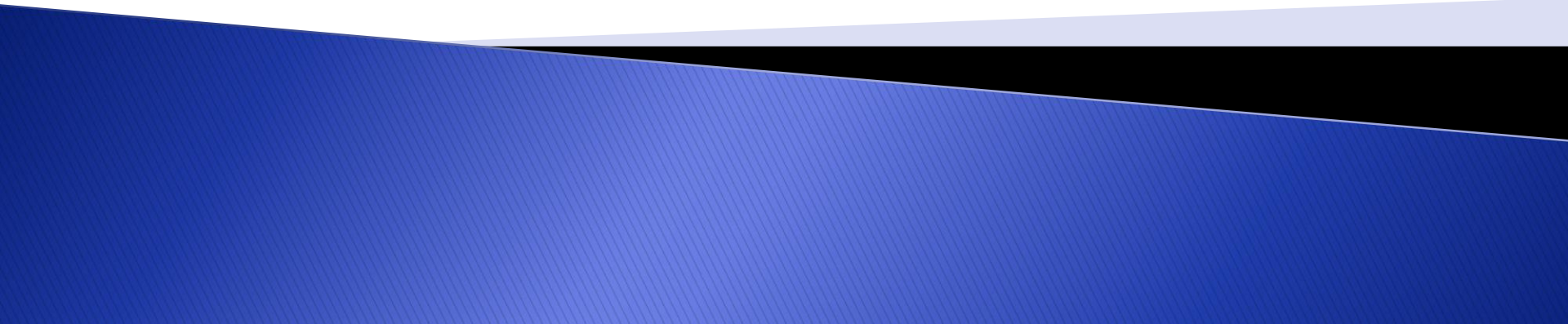


Presenting data & results

in Network Meta-Analysis



Outline

- ▶ Graphs presenting the data
- ▶ Graphs presenting the results
 - *Relative treatment effects*
 - *Treatment ranking*

Presenting the data

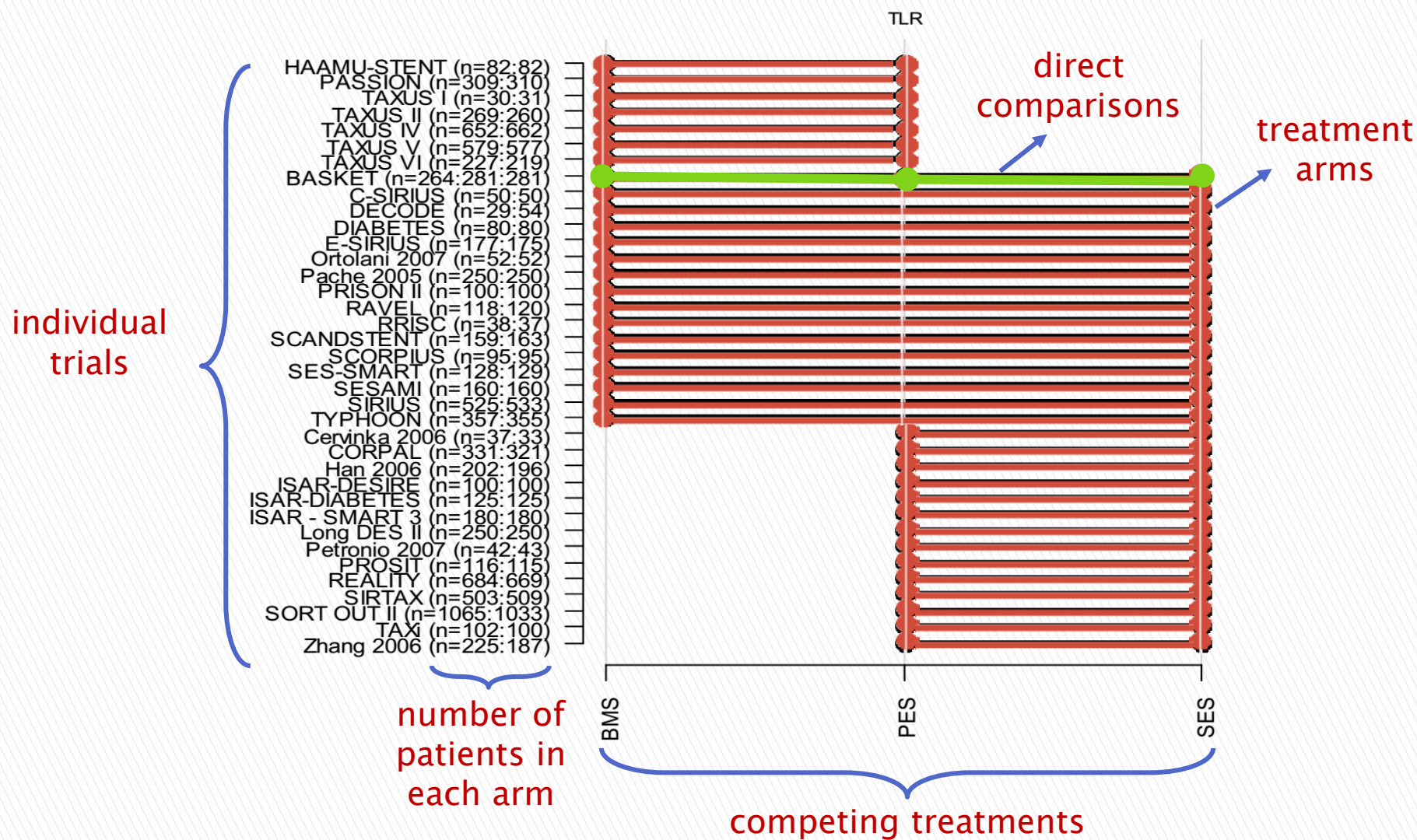
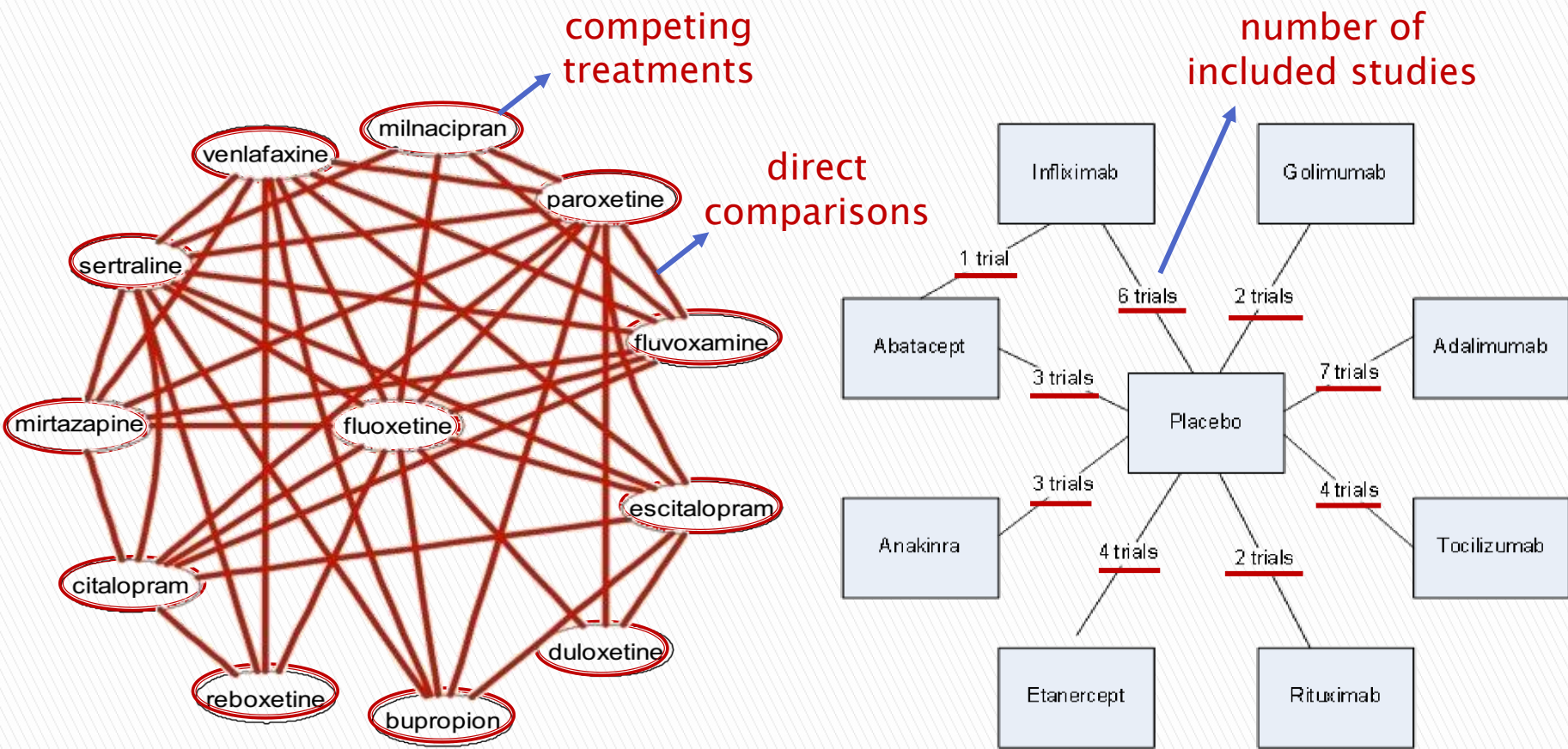


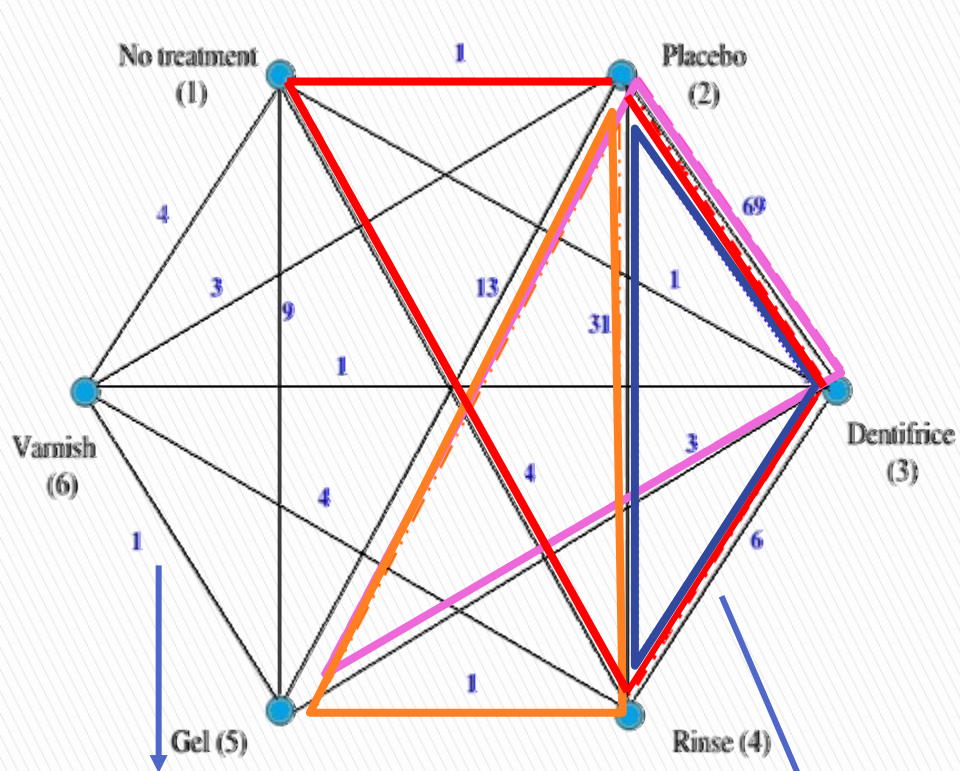
Diagram showing the comparisons involved in the individual studies of the network

[Example in Hoaglin et al. 2011]



Network graph showing the available direct comparisons in the network

[Examples in Hoaglin et al. 2011 & Jonas et al. 2013]



direct comparisons
from two-arm trials

direct comparisons from
multi-arm trials

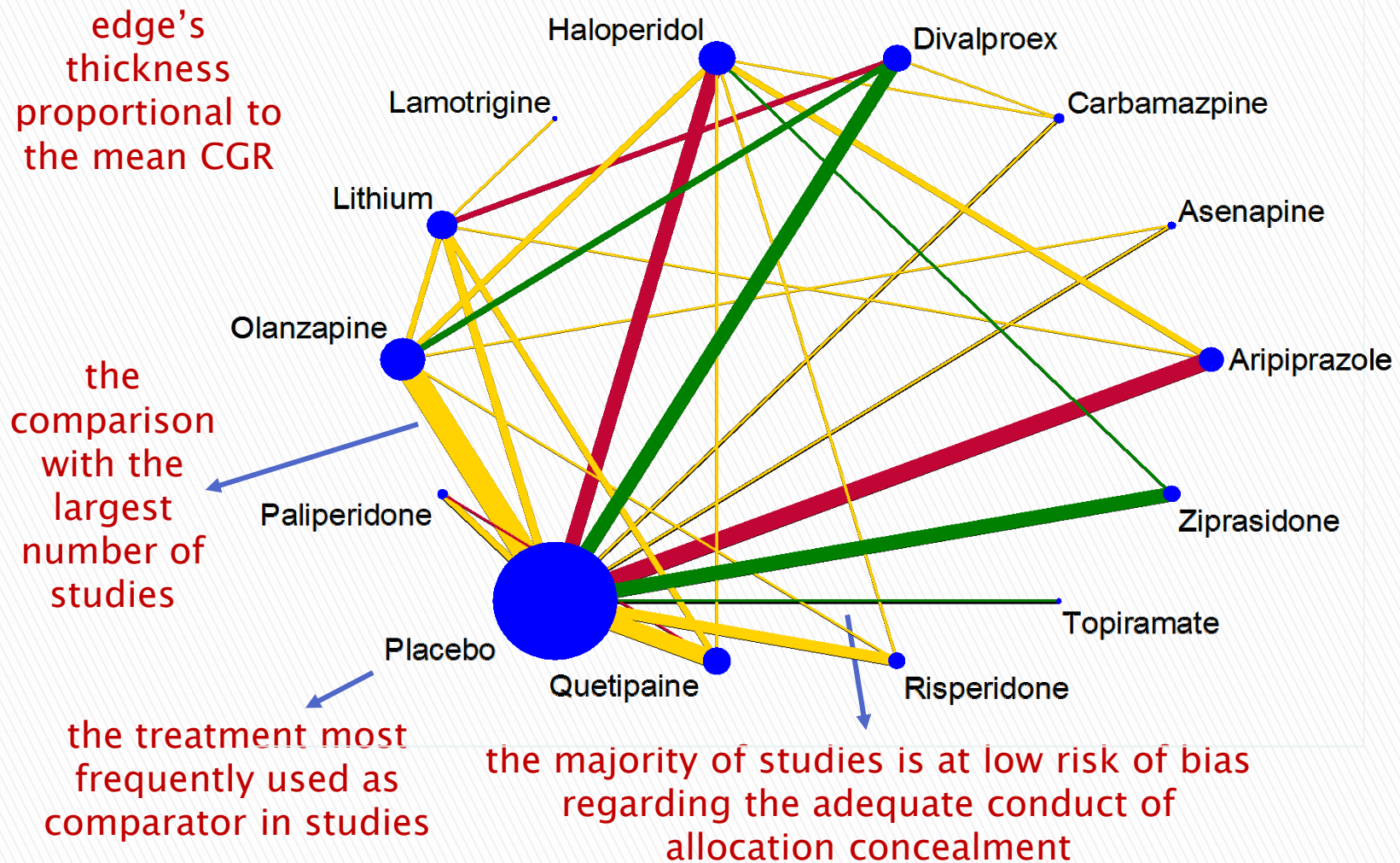
Type (g)	No. of studies	No. trt (1)	Placebo (2)	Dentifrice (3)	Rinse (4)	Gel (5)	Varnish (6)
1	9	X				X	
2	3	X			X		
3	4	X					X
4	61		X	X			
5	9		X			X	
6	25		X		X		
7	3		X				X
8	1			X	X		
9	1			X		X	
10	1					X	X
11	4				X		X
12	4		X	X	X		
13	3		X	X		X	
14	1		X		X	X	
15	1	X	X	X	X		

15 different
study designs

treatment arms
in each design

Network graph showing the presence of multi-arm trials & table showing the network structure; the available study designs in the network

[Examples in Lu et al. 2011]



Network graph with weighted and/or colored nodes and edges

[Examples in Chaimani et al. 2013]

number of trials comparing the treatments in the respective row and column

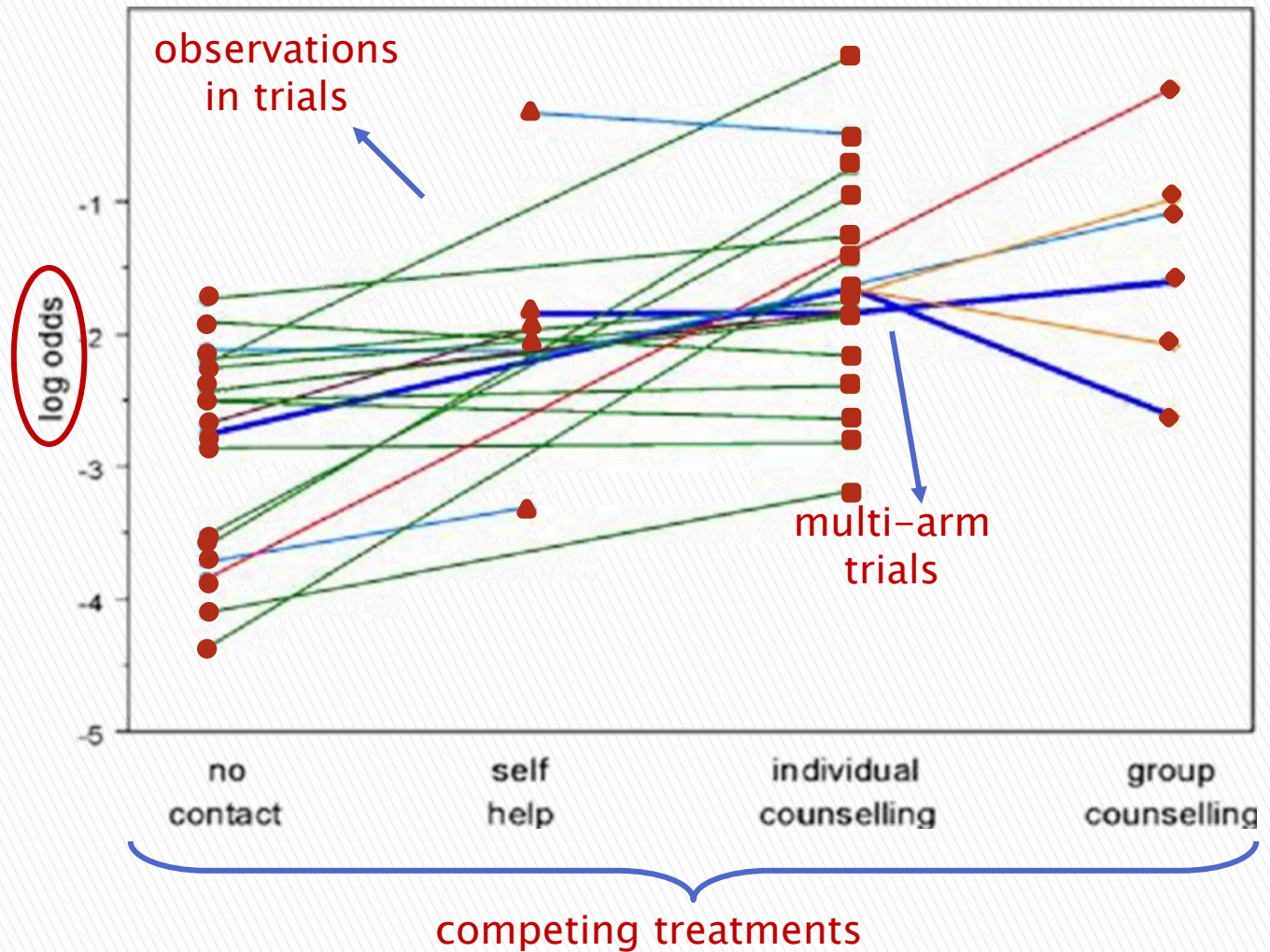
competing treatments

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X
A CTX>TMP/SMX	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
B TMP/SMX		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
C CTX			0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
D Cefotaxime				0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
E CTX+cefixime					1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
F Gentamicin daily						0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
G Gentamicin tid							0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
H A/Clav								0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0
I CTX+netilmicin>cefixime									0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
J CTX+netilmicin>CTX										0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
K Various											0	0	0	0	0	0	0	0	0	0	0	0	0	0
L Cefixime												1	0	0	0	0	0	0	0	0	0	0	0	0
M Cefotaxime>cefixime													0	0	0	0	0	0	0	0	0	0	0	0
N Isepamicin														1	0	0	0	0	0	0	0	0	0	0
O Amikacin															0	0	0	0	0	0	0	0	0	0
P Temocillin >A or A/Clav																1	0	0	0	0	0	0	0	0
Q CTX>A/Clav																	1	0	0	0	0	0	0	0
R Sulfafurazole																		1	0	0	0	0	0	0
S Cefepime>TMP/SMX																			1	0	0	0	0	0
T Ceftazidime>TMP/SMX																				1	0	0	0	0
U Cefetamet																					0	0	0	0
V Netilmicin daily																						1	0	0
W Netilmicin tid																							0	0
X CTX>ceftibuten																								0

Matrix showing the available direct comparisons in the network

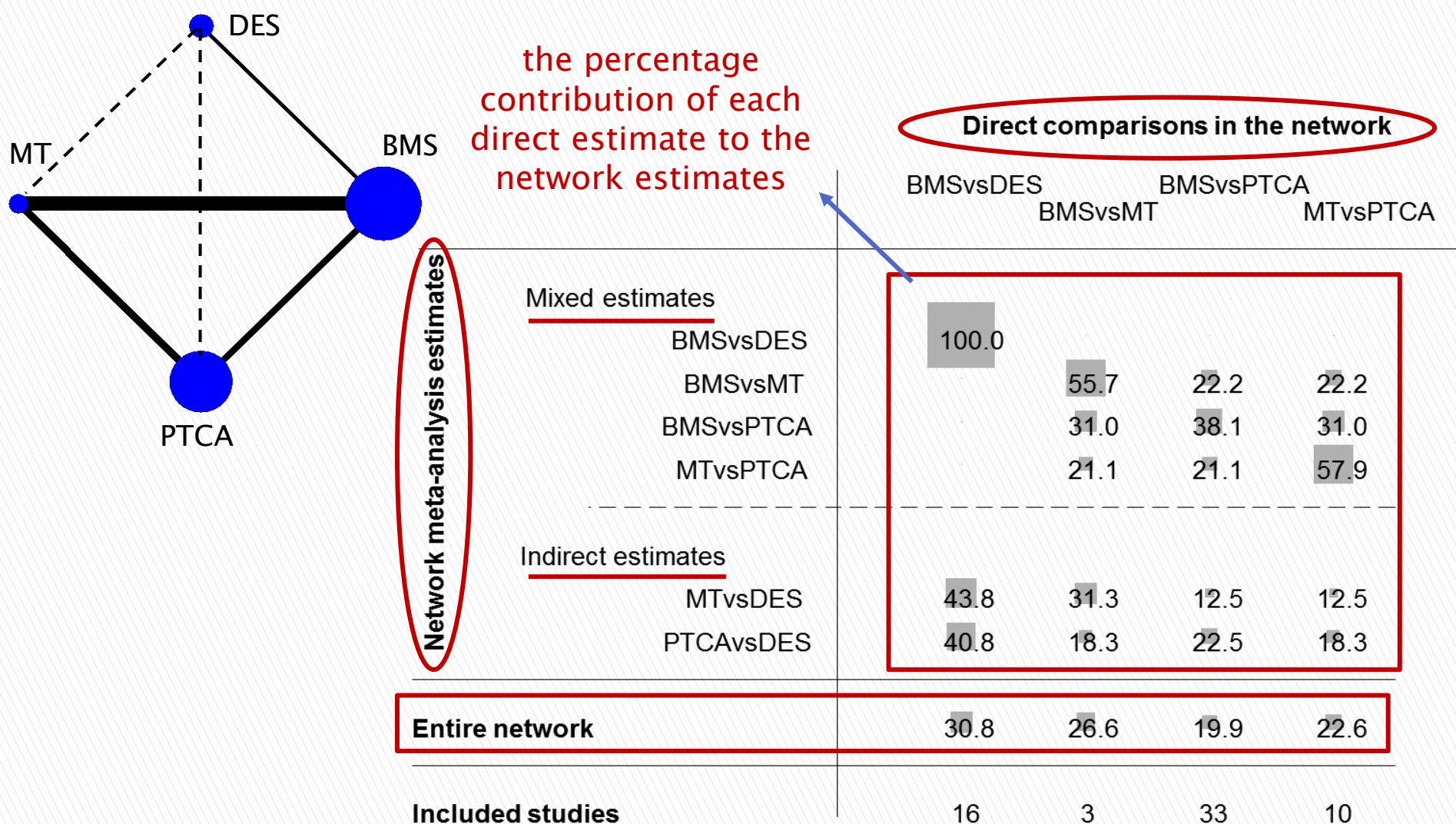
[Example in Ioannidis 2006]

*the slope of
the lines shows
which
treatments are
favored in
studies*



*Graph showing the data provided by the
individual studies of the network*

[Example in Lu & Ades 2006]

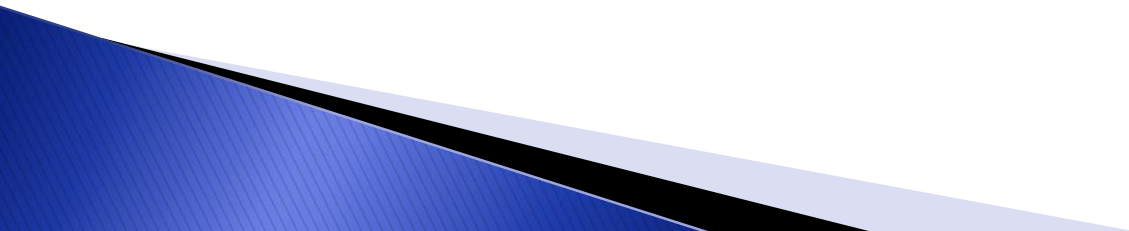


Graph showing the contribution of each direct comparison in the network estimates

[Example in Chaimani et al. 2013]

Presenting the results

relative treatment effects



relative treatment effects for efficacy
SMD < 0 favor the treatment in column

HAL	1.40 (0.93 to 2.11)	<u>1.49</u> (1.03 to 2.15)	0.81 (0.53 to 1.22)	1.32 (0.85 to 2.06)	1.11 (0.75 to 1.66)	1.16 (0.63 to 2.14)	0.86 (0.46 to 1.60)	1.16 (0.73 to 1.86)	0.93 (0.59 to 1.49)	0.69 (0.36 to 1.36)	0.85 (0.62 to 1.15)	<u>0.56</u> (0.34 to 0.93)	0.48 (0.16 to 1.44)
-0.06 (-0.22 to 0.11)	RIS	1.06 (0.72 to 1.56)	<u>0.58</u> (0.37 to 0.88)	0.94 (0.60 to 1.47)	0.80 (0.51 to 1.25)	0.83 (0.44 to 1.57)	0.62 (0.33 to 1.16)	0.83 (0.51 to 1.34)	0.67 (0.41 to 1.10)	<u>0.50</u> (0.25 to 0.98)	<u>0.61</u> (0.44 to 0.83)	<u>0.40</u> (0.24 to 0.68)	0.34 (0.11 to 1.03)
-0.12 (-0.28 to 0.02)	-0.07 (-0.22 to 0.08)	OLZ	<u>0.54</u> (0.37 to 0.79)	0.88 (0.58 to 1.36)	0.75 (0.49 to 1.13)	0.78 (0.43 to 1.44)	0.58 (0.33 to 1.00)	0.78 (0.52 to 1.17)	0.63 (0.40 to 1.00)	<u>0.47</u> (0.24 to 0.89)	<u>0.57</u> (0.44 to 0.74)	<u>0.38</u> (0.23 to 0.61)	<u>0.32</u> (0.11 to 0.95)
<u>-0.19</u> (-0.36 to -0.01)	-0.13 (-0.30 to 0.04)	-0.06 (-0.22 to 0.10)	LIT	<u>1.63</u> (1.06 to 2.54)	1.38 (0.91 to 2.12)	1.44 (0.81 to 2.60)	1.07 (0.57 to 2.00)	1.44 (0.92 to 2.28)	1.15 (0.71 to 1.91)	0.86 (0.47 to 1.59)	1.05 (0.78 to 1.43)	0.70 (0.44 to 1.11)	0.60 (0.20 to 1.77)
<u>-0.19</u> (-0.37 to -0.01)	-0.13 (-0.31 to 0.04)	-0.07 (-0.24 to 0.11)	-0.01 (-0.18 to 0.17)	QTP	0.85 (0.52 to 1.35)	0.88 (0.46 to 1.70)	0.66 (0.34 to 1.25)	0.88 (0.53 to 1.46)	0.71 (0.42 to 1.20)	0.53 (0.27 to 1.05)	<u>0.64</u> (0.45 to 0.91)	<u>0.43</u> (0.25 to 0.73)	0.36 (0.12 to 1.10)
<u>-0.19</u> (-0.36 to -0.02)	-0.13 (-0.31 to 0.05)	-0.06 (-0.23 to 0.11)	-0.01 (-0.18 to 0.17)	0.00 (-0.19 to 0.20)	ARI	1.04 (0.55 to 1.98)	0.77 (0.41 to 1.47)	1.05 (0.64 to 1.70)	0.84 (0.51 to 1.39)	0.62 (0.32 to 1.24)	0.76 (0.55 to 1.06)	<u>0.50</u> (0.30 to 0.85)	0.43 (0.14 to 1.29)
<u>-0.20</u> (-0.36 to -0.01)	-0.14 (-0.42 to 0.12)	-0.08 (-0.34 to 0.18)	-0.02 (-0.28 to 0.24)	-0.01 (-0.30 to 0.26)	-0.01 (-0.29 to 0.26)	CBZ	0.74 (0.34 to 1.62)	1.00 (0.52 to 1.91)	0.80 (0.41 to 1.59)	0.60 (0.27 to 1.33)	0.73 (0.42 to 1.28)	<u>0.48</u> (0.25 to 0.96)	0.41 (0.13 to 1.37)
<u>-0.26</u> (-0.52 to -0.01)	-0.20 (-0.46 to 0.05)	-0.14 (-0.36 to 0.10)	-0.08 (-0.41 to 0.27)	-0.07 (-0.34 to 0.20)	-0.07 (-0.34 to 0.20)	-0.06 (-0.39 to 0.28)	ASE	1.35 (0.71 to 2.58)	1.08 (0.56 to 2.14)	0.81 (0.36 to 1.83)	0.98 (0.57 to 1.72)	0.65 (0.33 to 1.30)	0.56 (0.17 to 1.82)
-0.36 (-0.56 to -0.15)	<u>-0.30</u> (-0.50 to -0.10)	<u>-0.23</u> (-0.40 to -0.06)	-0.10 (-0.41 to 0.23)	-0.17 (-0.38 to 0.05)	-0.17 (-0.38 to 0.05)	-0.15 (-0.44 to 0.13)	-0.10 (-0.37 to 0.18)	VAL	0.80 (0.47 to 1.37)	0.60 (0.30 to 1.20)	0.73 (0.51 to 1.05)	<u>0.48</u> (0.28 to 0.83)	0.41 (0.13 to 1.25)
<u>-0.36</u> (-0.56 to -0.15)	<u>-0.31</u> (-0.51 to -0.10)	<u>-0.24</u> (-0.43 to -0.03)	-0.15 (-0.44 to 0.16)	-0.17 (-0.39 to 0.05)	-0.18 (-0.39 to 0.04)	-0.16 (-0.45 to 0.14)	-0.10 (-0.39 to 0.18)	-0.01 (-0.24 to 0.23)	ZIP	0.75 (0.37 to 1.51)	0.91 (0.61 to 1.34)	0.61 (0.34 to 1.06)	0.52 (0.17 to 1.58)
<u>-0.48</u> (-0.77 to -0.19)	<u>-0.43</u> (-0.71 to -0.14)	<u>-0.36</u> (-0.64 to -0.08)	-0.32 (-0.67 to 0.06)	-0.29 (-0.58 to 0.00)	-0.29 (-0.58 to 0.00)	-0.28 (-0.63 to 0.08)	-0.22 (-0.57 to 0.12)	-0.13 (-0.43 to 0.18)	-0.12 (-0.43 to 0.19)	LAM	1.22 (0.67 to 2.21)	0.81 (0.40 to 1.65)	0.69 (0.21 to 2.30)
<u>-0.56</u> (-0.69 to -0.43)	<u>-0.50</u> (-0.63 to -0.38)	<u>-0.43</u> (-0.54 to -0.32)	<u>-0.37</u> (-0.63 to -0.11)	<u>-0.37</u> (-0.51 to -0.23)	<u>-0.37</u> (-0.51 to -0.23)	<u>-0.36</u> (-0.60 to -0.11)	<u>-0.30</u> (-0.53 to -0.07)	<u>-0.20</u> (-0.37 to -0.04)	<u>-0.20</u> (-0.37 to -0.03)	-0.08 (-0.34 to 0.18)	PBO	0.66 (0.44 to 1.00)	0.57 (0.20 to 1.62)
<u>-0.63</u> (-0.84 to -0.43)	<u>-0.58</u> (-0.78 to -0.37)	<u>-0.51</u> (-0.70 to -0.31)	<u>-0.45</u> (-0.75 to -0.14)	<u>-0.44</u> (-0.66 to -0.23)	<u>-0.45</u> (-0.66 to -0.23)	<u>-0.43</u> (-0.72 to -0.14)	<u>-0.38</u> (-0.66 to -0.09)	<u>-0.28</u> (-0.52 to -0.04)	<u>-0.27</u> (-0.51 to -0.04)	-0.15 (-0.46 to 0.15)	-0.07 (-0.24 to 0.09)	TOP	0.85 (0.28 to 2.63)
<u>-0.88</u> (-1.40 to -0.36)	<u>-0.83</u> (-1.34 to -0.31)	<u>-0.76</u> (-1.27 to -0.24)	<u>-0.70</u> (-1.21 to -0.18)	<u>-0.69</u> (-1.21 to -0.17)	<u>-0.69</u> (-1.21 to -0.17)	<u>-0.68</u> (-1.23 to -0.12)	<u>-0.62</u> (-1.17 to -0.07)	-0.53 (-1.05 to 0.01)	-0.52 (-1.05 to 0.01)	-0.40 (-0.96 to 0.16)	-0.32 (-0.82 to 0.18)	-0.25 (-0.77 to 0.28)	GBT

■ Treatment ■ Efficacy (SMD with 95% CrI) □ Dropout rate (OR with 95% CrI)

relative treatment effects for dropout rate
OR > 1 favor the treatment in column

*significant effects are in bold and competing treatments
underscored font*

*Table showing all the pairwise relative treatment
effects with their 95% CI for one or two outcomes*

[Example in Cipriani et al. 2011]

observations in studies

Comparison

Mean HR (95% CI)

observed comparisons

Docetaxel vs. placebo
TAX317 (n=55:49)
Network meta-analysis

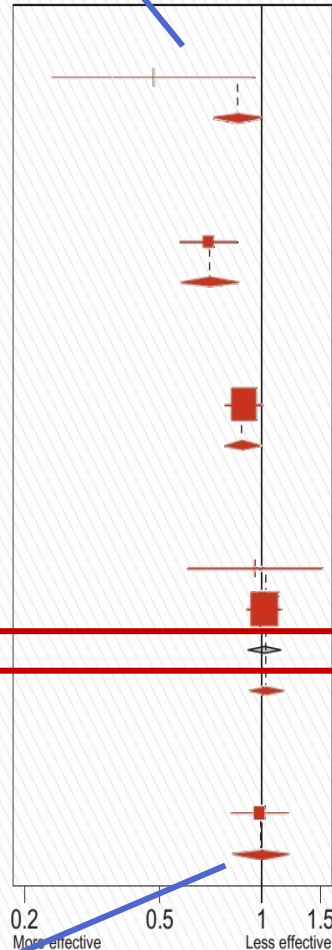
Erlotinib vs. placebo
BR21 (n=488:243)
Network meta-analysis

Gefitinib vs. placebo
ISEL (n=1129:563)
Network meta-analysis

Gefitinib vs. docetaxel
SIGN (n=68:73)
Interest (n=723:710)

Pairwise meta-analysis
Network meta-analysis

Pemetrexed vs. docetaxel
JMEI (n=283:288)
Network meta-analysis

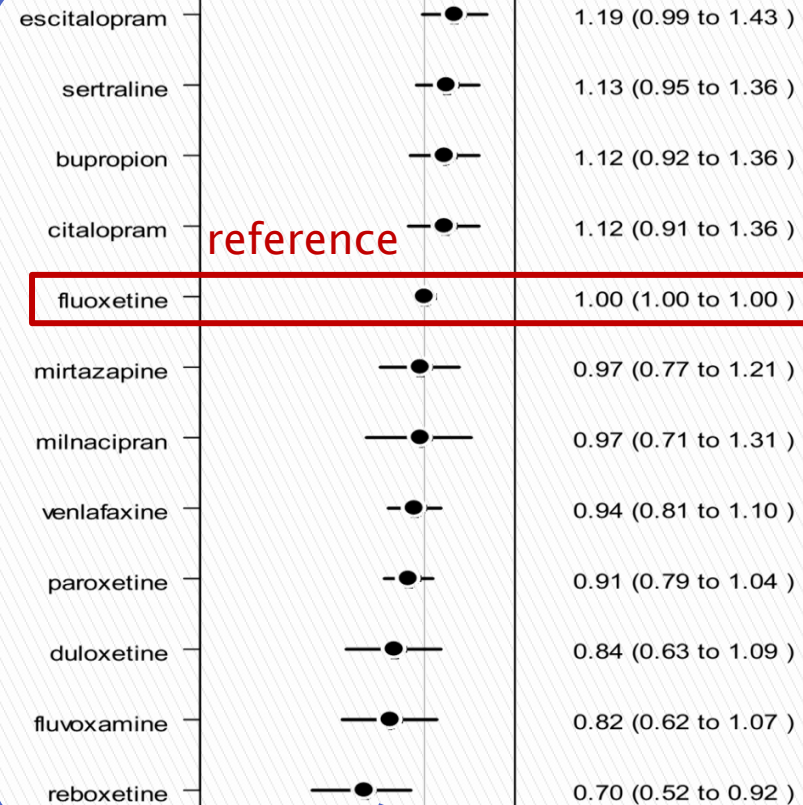


network
estimates

Hazard ratio (log scale)

Acceptability

competing treatments

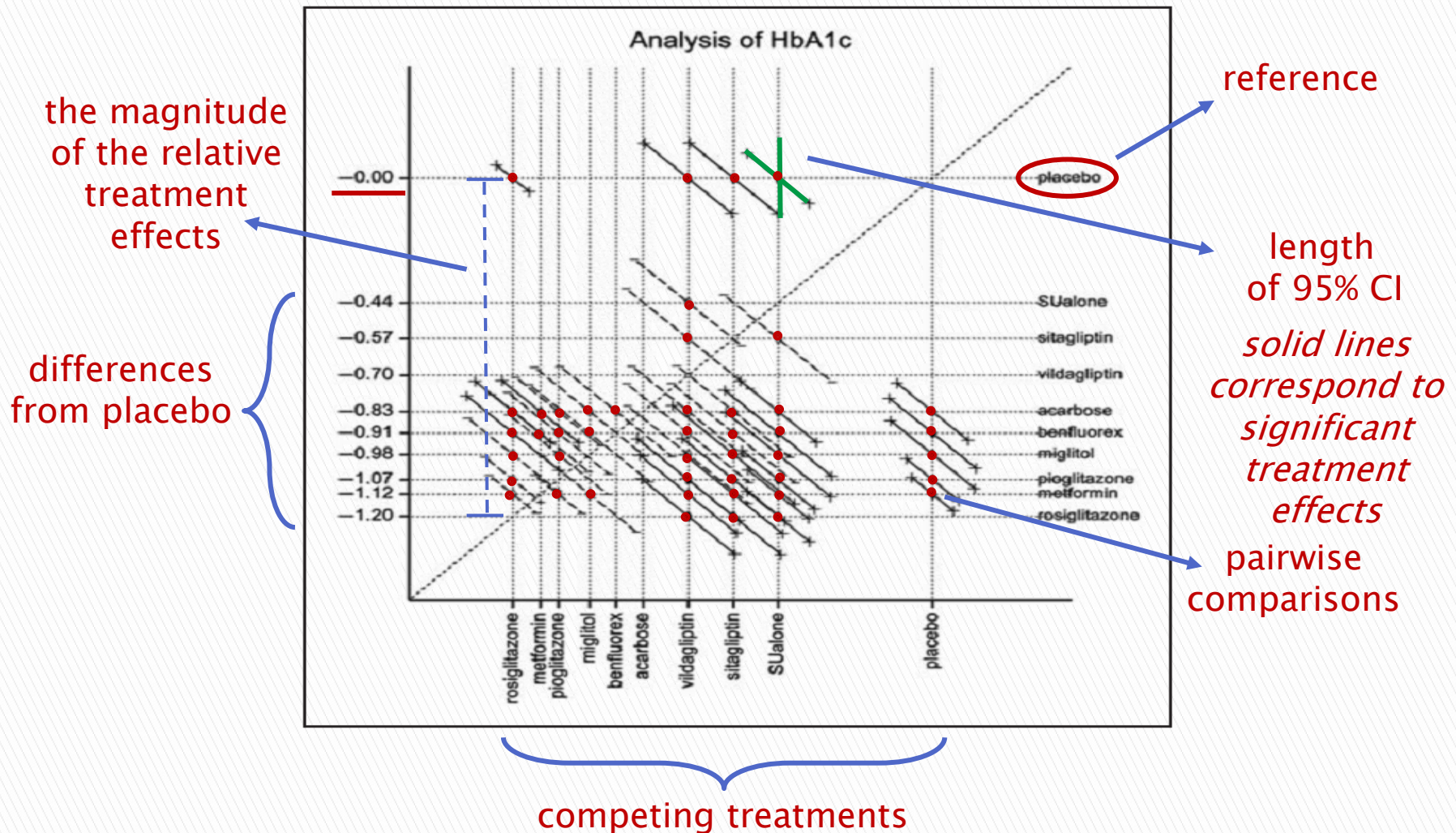


Odds Ratio (log scale)
Median (95% Credible Interval)

network
estimates

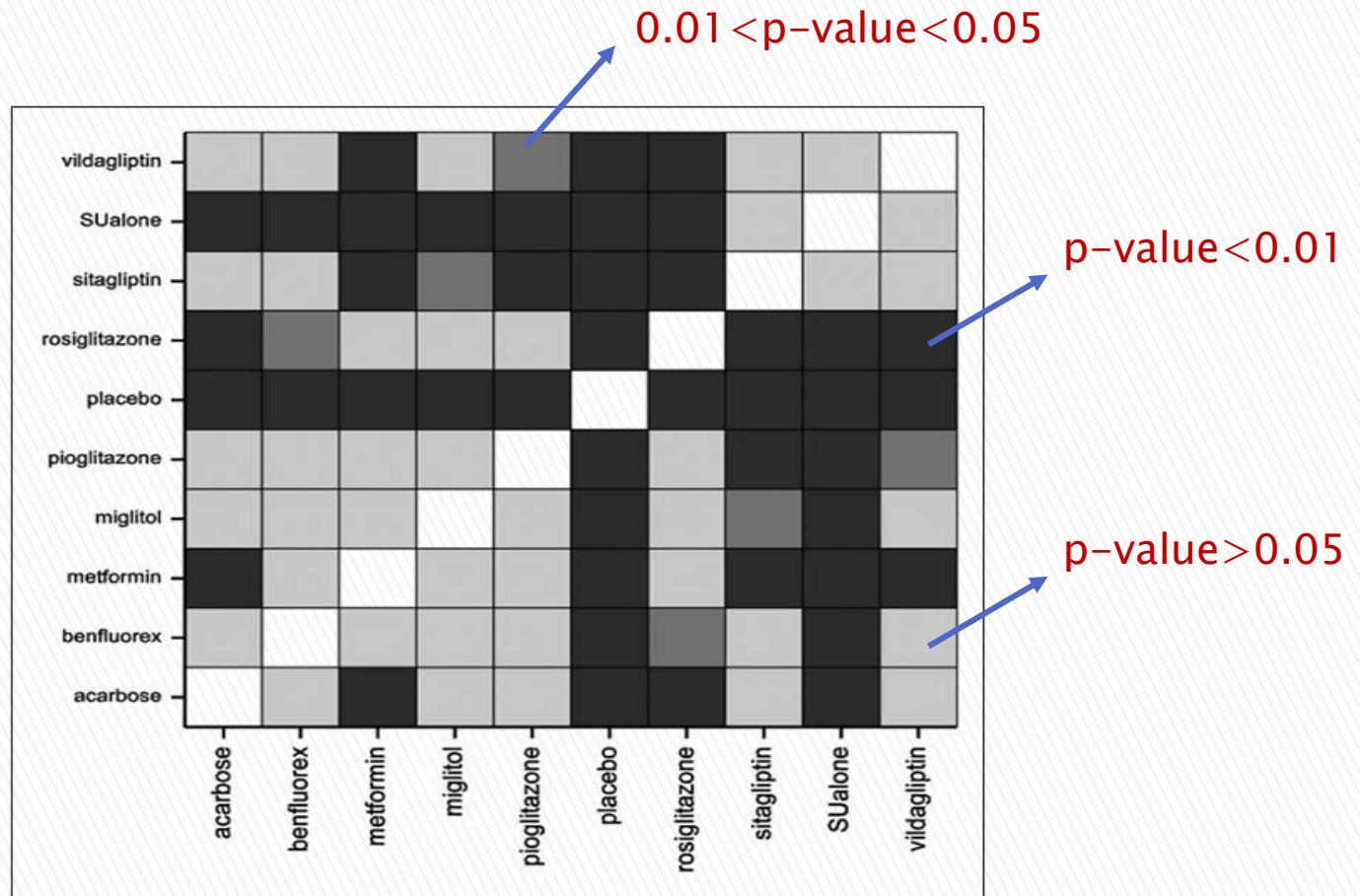
*Forest plot with the treatment effects
estimates for the pairwise comparisons*

[Examples in Hawkins et al. 2009 & Hoaglin et al. 2011]



'Hsu mean-mean plot' showing the network estimates with the 95% CI for all pairwise comparisons

[Example in Senn et al. 2013]



Shade plot showing the p-values of the treatment effects for all pairwise comparisons in the network

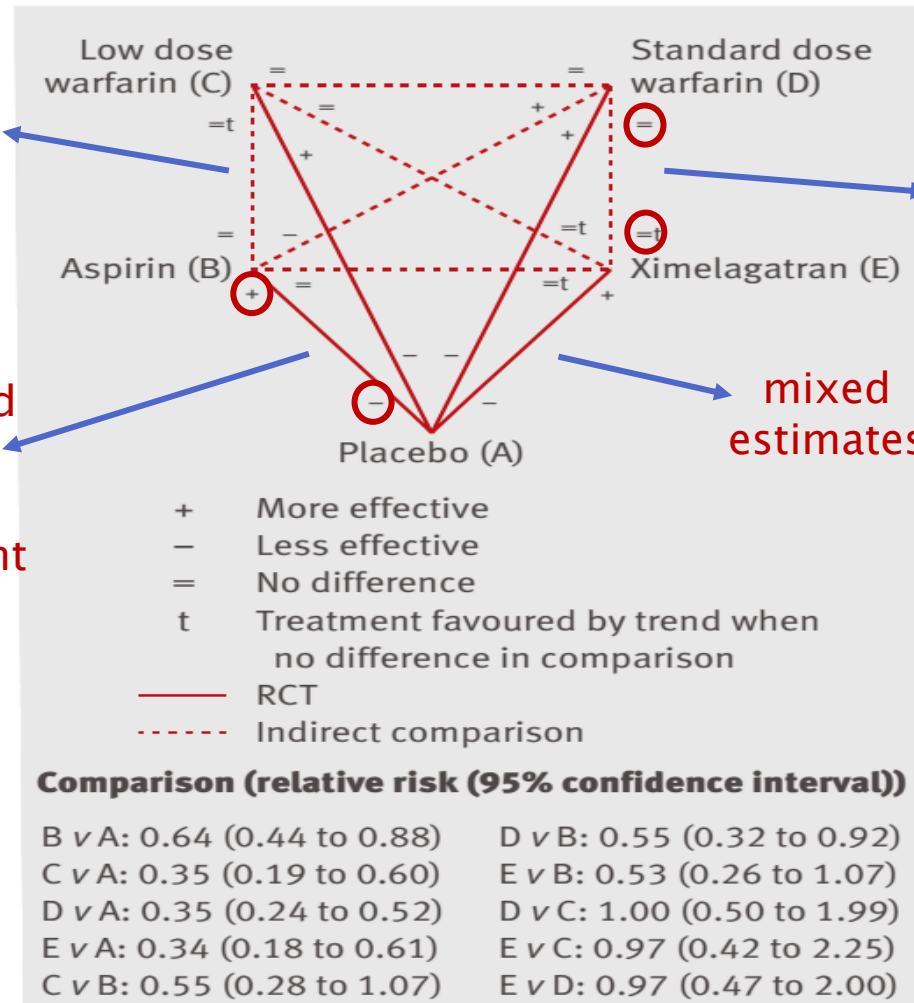
[Example in Senn et al. 2013]

indirect estimates

in comparisons with non-significant relative treatment effects (based on the network estimates):
 't' the favored treatment
 '=' the non-favored treatment

in comparisons with significant relative treatment effects (based on the network estimates):
 '+' the favored treatment
 '-' the non-favored treatment

mixed estimates



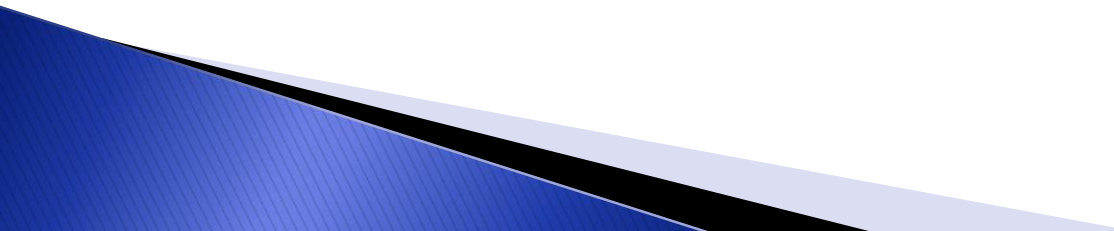
Network graph presenting the relative treatment effects for each pairwise comparison

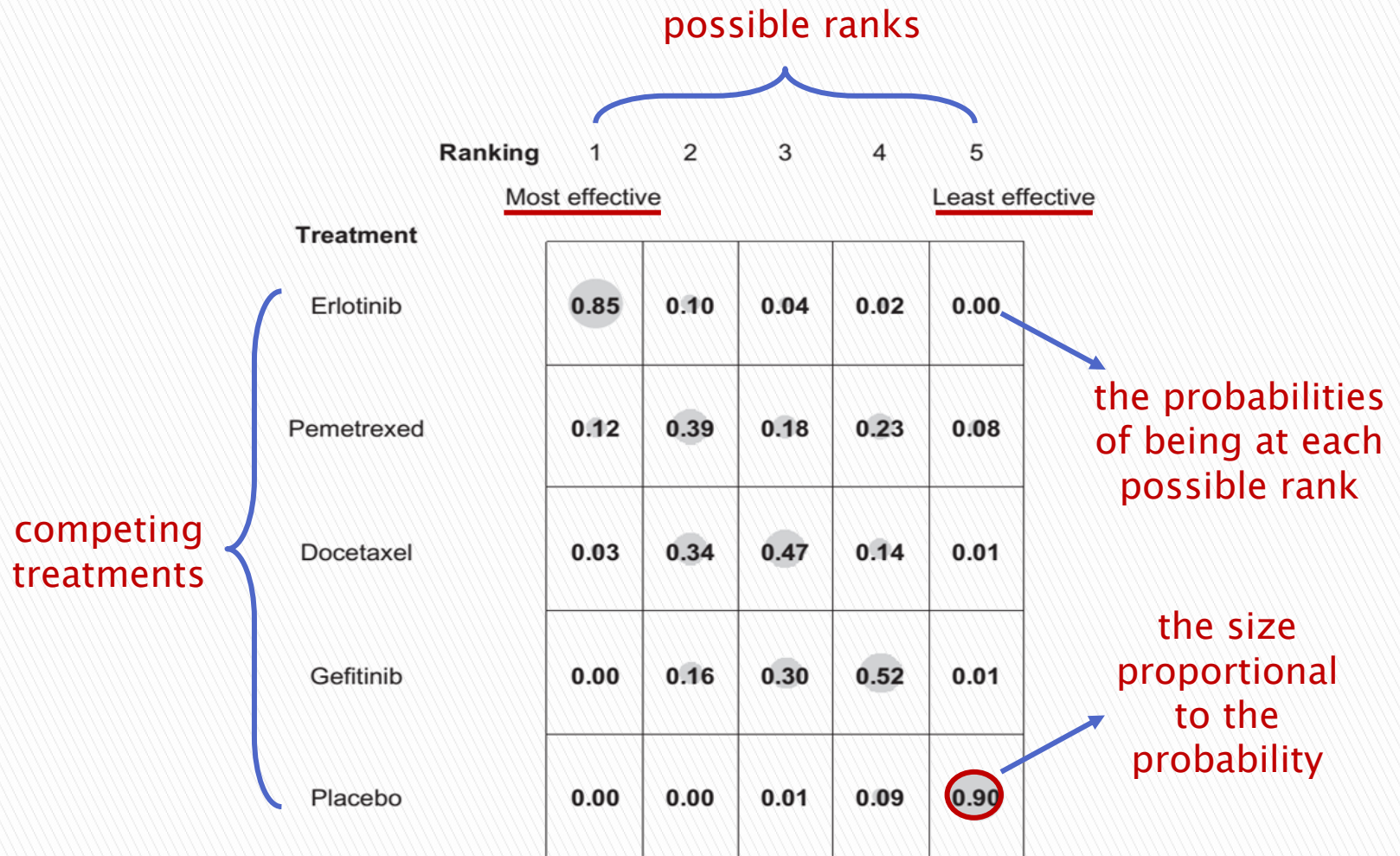
[Example in Fadda et al. 2011]

Presenting the results

treatment ranking

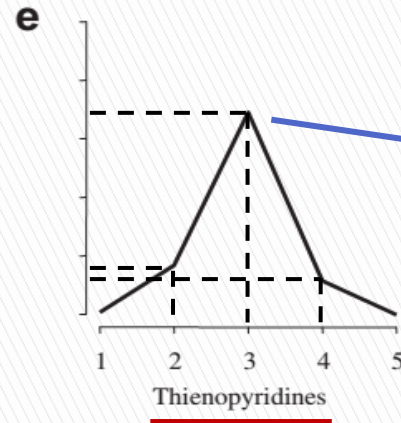
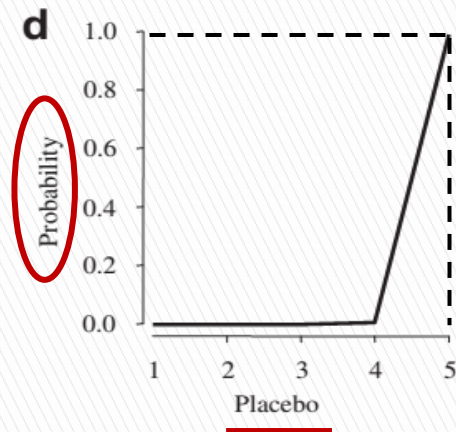
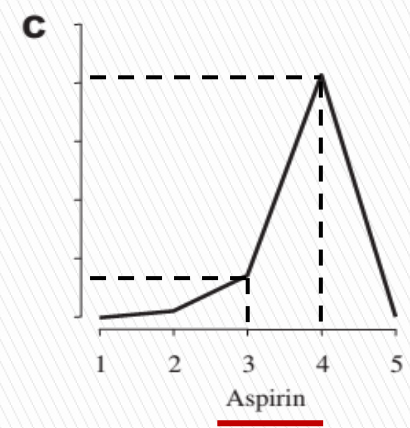
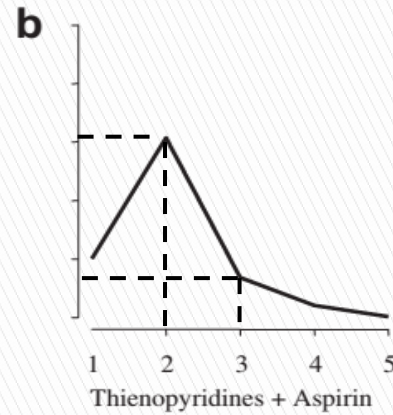
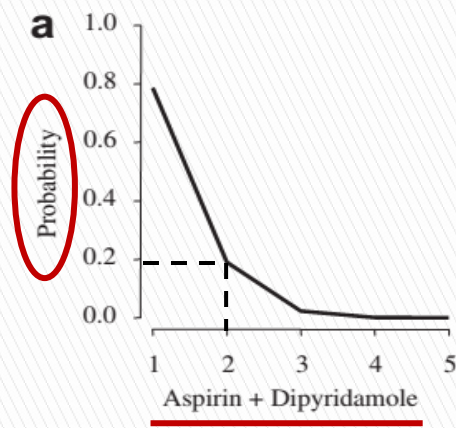
Ranking based on probabilities

- ▶ Using probability of being the best
 - ▶ Using probabilities of being at each possible rank
 - ▶ Using SUCRAS
- 



‘Bubble-plot’ including the ranking probabilities for all treatments

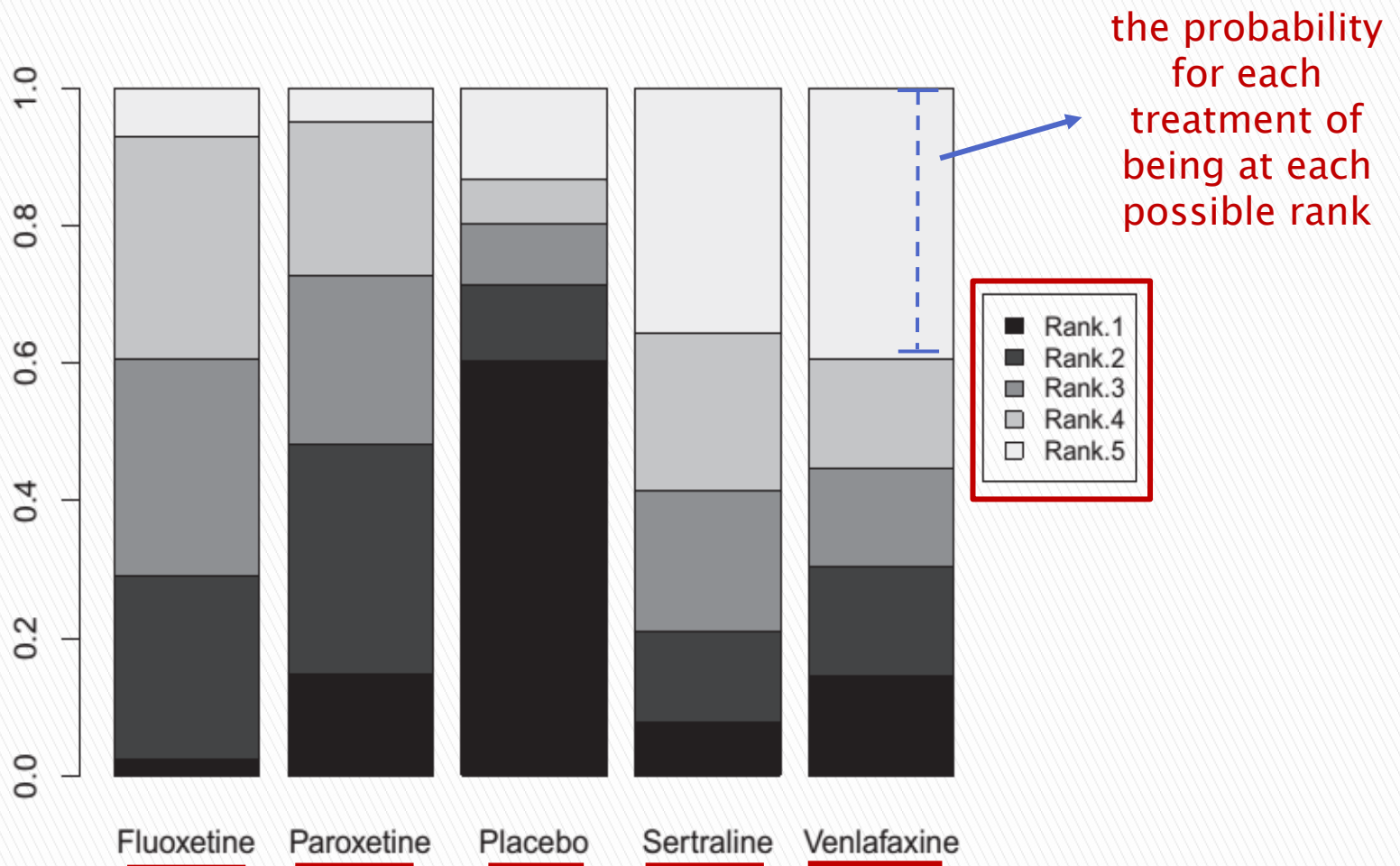
[Example in Hawkins et al. 2009]



the probability for
each treatment of
being at each
possible rank

‘Rankograms’ showing the probability for each treatment of being at a specific rank

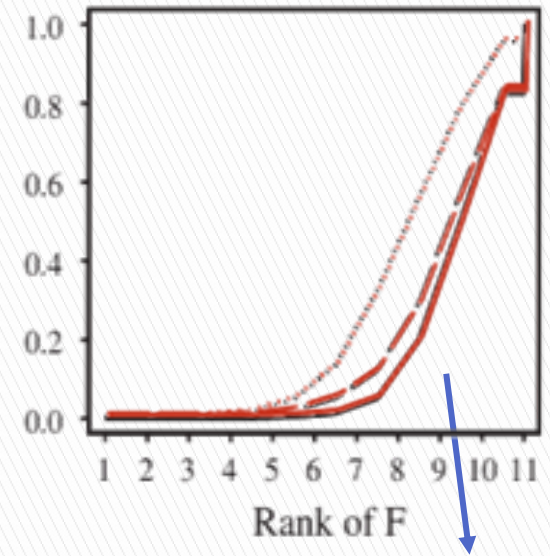
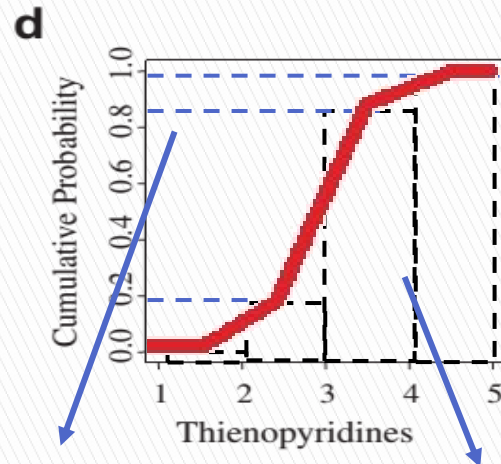
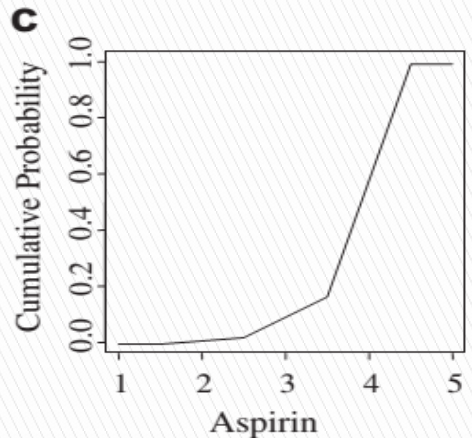
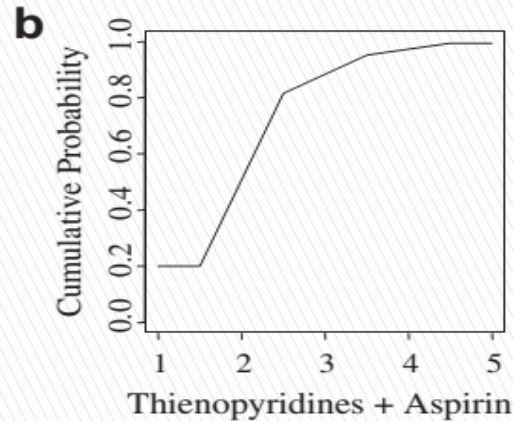
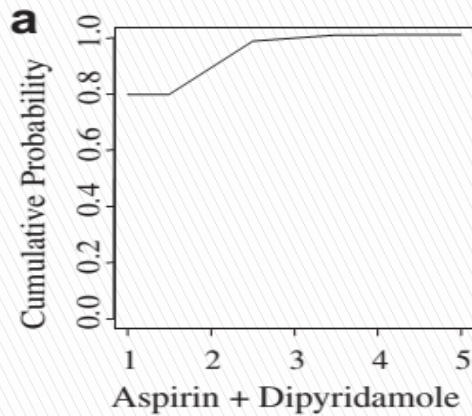
[Example in Salanti et al. 2011]



Bar plots showing the probability for each treatment of being at a specific rank

[Example in van Valkenhoef et al. 2012]

cumulative probability



each line pattern corresponds to a different model

the cumulative probability for each treatment of being up to each possible rank

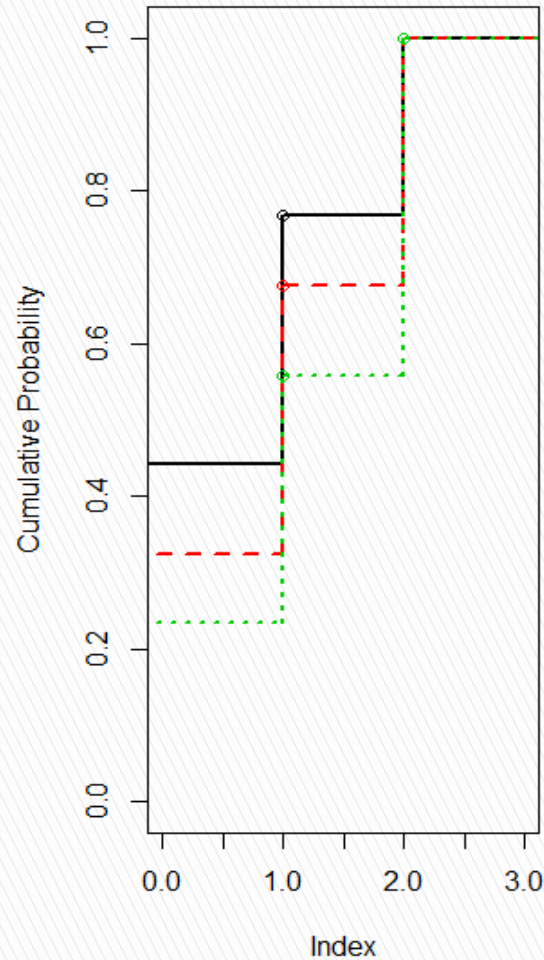
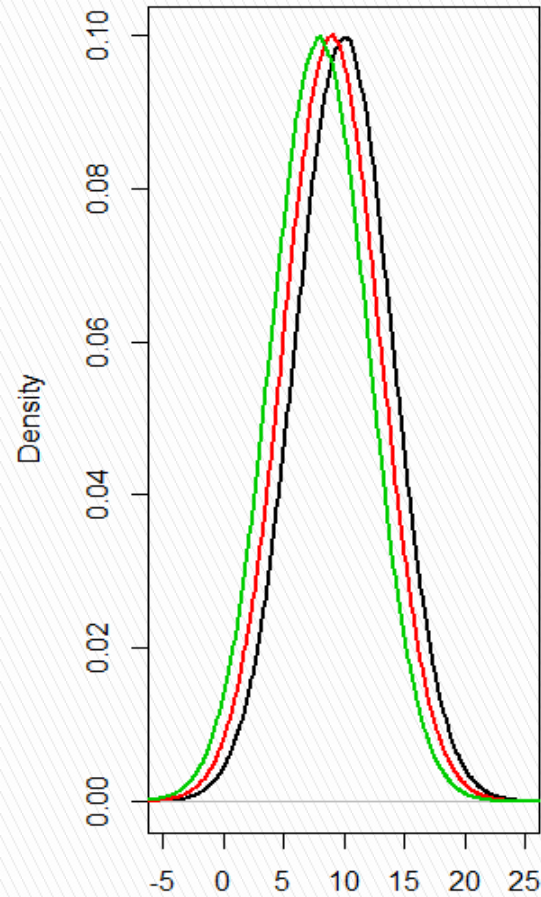
the larger the surface under the curve the 'better' the treatment
– it can be also expressed as a percentage

'SUCRA plots' showing the cumulative probability for each treatment of being up to a specific rank

[Examples in Salanti et al. 2011 & Salanti et al. 2010]

Ranking based on probabilities – caution is needed

- ▶ Using $P(\text{best})$ to rank treatments can be misleading
- ▶ Ranking based on SUCRAs accounts better for the uncertainty in the estimated treatment effects



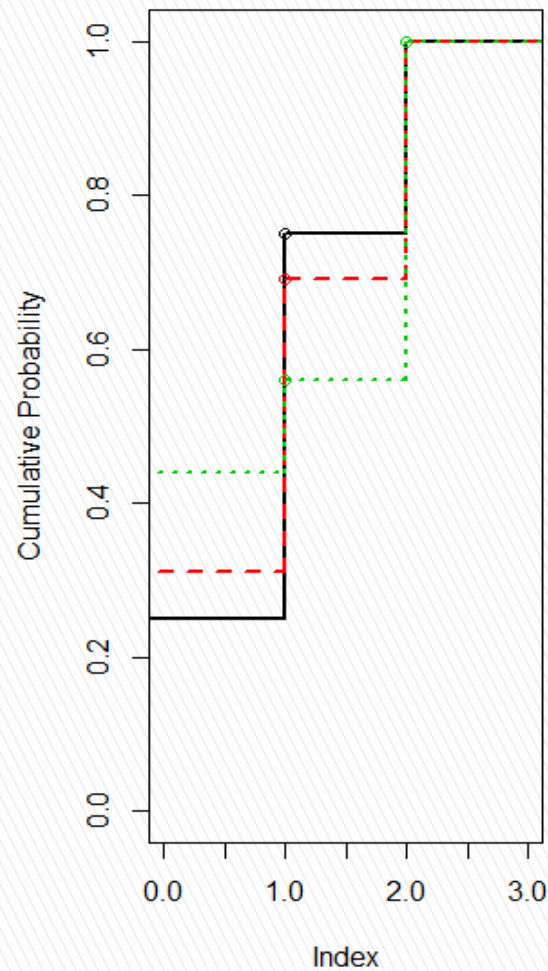
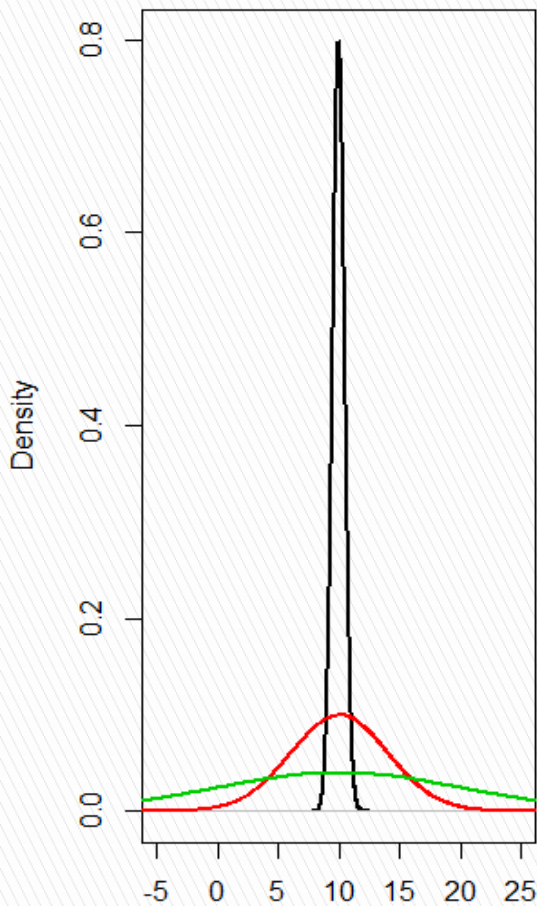
$x \sim N(10, 4)$

$y \sim N(9, 4)$

$z \sim N(8, 4)$

	x	y	z
P(best)	0.44	0.33	0.23
P(sec)	0.33	0.35	0.32
P(third)	0.22	0.32	0.44
<i>Sucras</i>	<i>0.60</i>	<i>0.50</i>	<i>0.40</i>

Different means – Equal variances



$x \sim N(10.0, 5)$

$y \sim N(10, 4)$

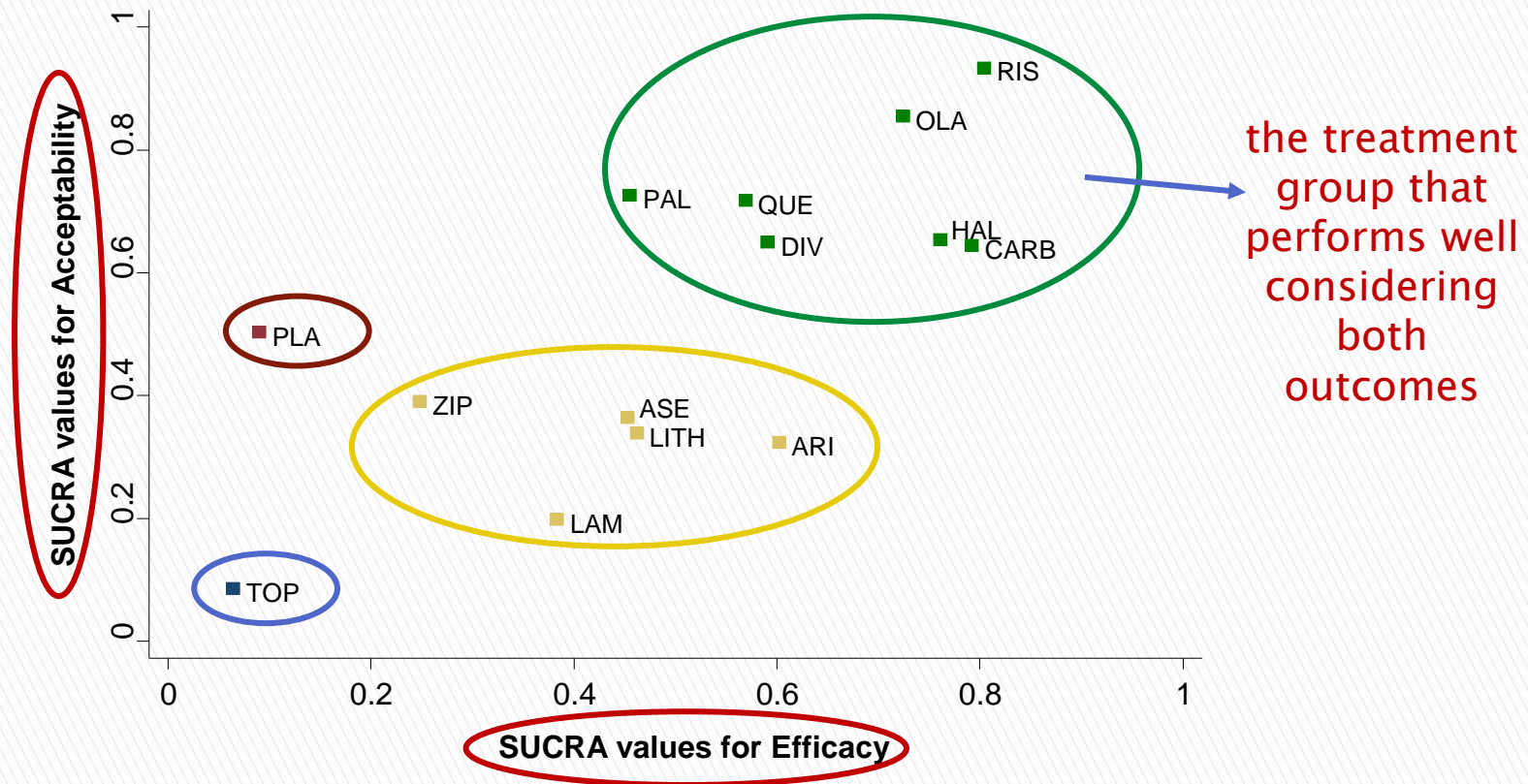
$z \sim N(10, 10)$

	x	y	z
P(best)	0.25	0.31	0.44
P(sec)	0.50	0.38	0.12
P(third)	0.25	0.31	0.44
<i>Sucras</i>	<i>0.50</i>	<i>0.50</i>	<i>0.50</i>

Equal means – Different variances

Ranking based on probabilities – caution is needed

- ▶ Using $P(\text{best})$ to rank treatments can be misleading
- ▶ Ranking based on SUCRAs accounts better for the uncertainty in the estimated treatment effects
- ▶ SUCRAs are conditional on a set of treatments being compared
 - This means SUCRAs and possibly the ranking will change if the subset of the treatments are compared
- ▶ Ranking measures are not a substitute for relative treatment effects
 - They are not the only useful measure for clinicians



Scatterplot showing jointly the ranking results for two different outcomes

[Example in Chaimani et al. 2013]

HAL 0.95/0.47		1.49 (1.03 to 2.15)		0.81 (0.53 to 1.22)	1.32 (0.85 to 2.06)	1.11 (0.75 to 1.66)	1.16 (0.63 to 2.14)	0.86 (0.46 to 1.60)	1.16 (0.73 to 1.86)	0.93 (0.59 to 1.49)	0.69 (0.36 to 1.36)	0.85 (0.62 to 1.15)	0.56 (0.34 to 0.93)	0.48 (0.16 to 1.44)
-0.06 (-0.22 to 0.11)	RIS 0.94/0.78		0.56 (0.37 to 0.95)	0.58 (0.37 to 0.88)	0.94 (0.60 to 1.47)	0.80 (0.51 to 1.25)	0.83 (0.44 to 1.57)	0.62 (0.33 to 1.16)	0.83 (0.51 to 1.34)	0.67 (0.41 to 1.10)	0.50 (0.25 to 0.98)	0.61 (0.44 to 0.83)	0.40 (0.24 to 0.68)	0.34 (0.11 to 1.03)
-0.12 (-0.28 to 0.02)	-0.07 (-0.22 to 0.08)	OLZ 0.78/0.81		0.54 (0.37 to 0.79)	0.88 (0.58 to 1.36)	0.75 (0.49 to 1.13)	0.78 (0.43 to 1.44)	0.58 (0.33 to 1.00)	0.78 (0.52 to 1.17)	0.63 (0.40 to 1.00)	0.47 (0.24 to 0.89)	0.57 (0.44 to 0.74)	0.38 (0.23 to 0.61)	0.32 (0.11 to 0.95)
-0.19 (-0.36 to -0.01)	-0.13 (-0.30 to 0.04)	-0.06 (-0.22 to 0.10)	LIT 0.64/0.27		0.63 (0.41 to 0.91)	1.38 (0.91 to 2.12)	1.44 (0.81 to 2.60)	1.07 (0.57 to 2.00)	1.44 (0.92 to 2.28)	1.15 (0.71 to 1.91)	0.86 (0.47 to 1.59)	1.05 (0.78 to 1.43)	0.70 (0.44 to 1.11)	0.60 (0.20 to 1.77)
-0.19 (-0.37 to -0.01)	-0.13 (-0.31 to 0.04)	-0.07 (-0.24 to 0.11)	-0.01 (-0.18 to 0.17)	QTP 0.64/0.70		0.85 (0.46 to 1.35)	0.88 (0.46 to 1.70)	0.66 (0.34 to 1.25)	0.88 (0.53 to 1.46)	0.71 (0.42 to 1.20)	0.53 (0.27 to 1.05)	0.64 (0.45 to 0.91)	0.43 (0.25 to 0.73)	0.36 (0.12 to 1.10)
-0.19 (-0.36 to -0.02)	-0.13 (-0.31 to 0.05)	-0.06 (-0.23 to 0.11)	-0.01 (-0.18 to 0.17)	0.00 (-0.19 to 0.20)	ARI 0.61/0.57		1.04 (0.41 to 1.98)	0.77 (0.41 to 1.47)	1.05 (0.64 to 1.70)	0.84 (0.51 to 1.39)	0.62 (0.32 to 1.24)	0.76 (0.55 to 1.06)	0.50 (0.30 to 0.85)	0.43 (0.14 to 1.29)
-0.20 (-0.36 to -0.01)	-0.14 (-0.42 to 0.12)	-0.08 (-0.34 to 0.18)	-0.02 (-0.28 to 0.24)	-0.01 (-0.30 to 0.26)	-0.01 (-0.29 to 0.27)	CBZ 0.60/0.60		0.74 (0.34 to 1.62)	1.00 (0.52 to 1.91)	0.80 (0.41 to 1.59)	0.60 (0.27 to 1.33)	0.73 (0.42 to 1.28)	0.48 (0.25 to 0.96)	0.41 (0.13 to 1.37)
-0.26 (-0.52 to -0.01)	-0.20 (-0.46 to 0.05)	-0.14 (-0.36 to 0.10)	-0.08 (-0.41 to 0.27)	-0.07 (-0.34 to 0.20)	-0.07 (-0.34 to 0.20)	-0.06 (-0.39 to 0.27)	ASE 0.55/0.36		1.35 (0.71 to 2.58)	1.08 (0.56 to 2.14)	0.81 (0.36 to 1.83)	0.98 (0.57 to 1.72)	0.65 (0.33 to 1.30)	0.56 (0.17 to 1.82)
-0.36 (-0.56 to -0.15)	-0.30 (-0.50 to -0.10)	-0.23 (-0.40 to -0.06)	-0.10 (-0.41 to 0.23)	-0.17 (-0.38 to 0.05)	-0.17 (-0.38 to 0.05)	-0.15 (-0.44 to 0.13)	-0.10 (-0.37 to 0.17)	VAL 0.50/0.48		0.80 (0.47 to 1.37)	0.60 (0.30 to 1.20)	0.73 (0.51 to 1.05)	0.48 (0.28 to 0.83)	0.41 (0.13 to 1.25)
-0.36 (-0.56 to -0.15)	-0.31 (-0.51 to -0.10)	-0.24 (-0.43 to -0.03)	-0.15 (-0.44 to 0.16)	-0.17 (-0.39 to 0.05)	-0.18 (-0.39 to 0.04)	-0.16 (-0.45 to 0.14)	-0.10 (-0.39 to 0.18)	-0.01 (-0.24 to 0.22)	ZIP 0.47/0.41		0.75 (0.37 to 1.51)	0.91 (0.61 to 1.34)	0.61 (0.34 to 1.06)	0.52 (0.17 to 1.58)
-0.48 (-0.77 to -0.19)	-0.43 (-0.71 to -0.14)	-0.36 (-0.64 to -0.08)	-0.32 (-0.67 to 0.06)	-0.29 (-0.58 to 0.00)	-0.29 (-0.58 to 0.00)	-0.28 (-0.63 to 0.08)	-0.22 (-0.57 to 0.12)	-0.13 (-0.43 to 0.18)	-0.11 (-0.43 to 0.21)	LAM 0.40/0.21		1.22 (0.67 to 2.21)	0.81 (0.40 to 1.65)	0.69 (0.21 to 2.30)
-0.56 (-0.69 to -0.43)	-0.50 (-0.63 to -0.38)	-0.43 (-0.54 to -0.32)	-0.37 (-0.63 to -0.11)	-0.37 (-0.51 to -0.23)	-0.37 (-0.51 to -0.23)	-0.36 (-0.60 to -0.11)	-0.30 (-0.53 to -0.07)	-0.20 (-0.37 to -0.04)	-0.20 (-0.37 to -0.03)	-0.01 (-0.34 to 0.32)	PBO 0.36/0.30		0.66 (0.44 to 1.00)	0.57 (0.20 to 1.62)
-0.63 (-0.84 to -0.43)	-0.58 (-0.78 to -0.37)	-0.51 (-0.70 to -0.31)	-0.45 (-0.75 to -0.14)	-0.44 (-0.66 to -0.23)	-0.45 (-0.66 to -0.23)	-0.43 (-0.72 to -0.14)	-0.38 (-0.66 to -0.09)	-0.28 (-0.52 to -0.04)	-0.27 (-0.51 to -0.04)	-0.15 (-0.46 to 0.15)	-0.01 (-0.24 to 0.22)	TOP 0.23/0.09		0.85 (0.28 to 2.63)
-0.88 (-1.40 to -0.36)	-0.83 (-1.34 to -0.31)	-0.76 (-1.27 to -0.24)	-0.70 (-1.21 to -0.18)	-0.69 (-1.21 to -0.17)	-0.69 (-1.21 to -0.17)	-0.68 (-1.23 to -0.12)	-0.62 (-1.17 to -0.07)	-0.53 (-1.05 to 0.01)	-0.52 (-1.05 to 0.01)	-0.40 (-0.96 to 0.16)	-0.32 (-0.82 to 0.18)	-0.01 (-0.77 to 0.75)	GBT 0.13/0.12	

Treatment

Efficacy (SMD with 95% CrI)

Dropout rate (OR with 95% CrI)

competing treatments ordered according to their relative ranking for efficacy

Table showing all the pairwise relative treatment effects with their 95% CI for one or two outcomes along with the SUCRA values

References

- ▶ Lu G, Welton NJ, Higgins JPT, White IR, Ades AE: Linear inference for mixed treatment comparison meta-analysis: A two-stage approach. *Res Synth Meth* 2011, 2: 43–60.
- ▶ Cipriani A, Barbui C, Salanti G, Rendell J, Brown R, Stockton S *et al.*: Comparative efficacy and acceptability of antimanic drugs in acute mania: a multiple-treatments meta-analysis. *Lancet* 2011, 378: 1306–1315.
- ▶ Fadda V, Maratea D, Trippoli S, Messori A: Network meta-analysis: Results can be summarised in a simple figure. *BMJ* 2011, 342: d1555.
- ▶ van VG, Tervonen T, Zhao J, de BB, Hillege HL, Postmus D: Multicriteria benefit-risk assessment using network meta-analysis. *J Clin Epidemiol* 2012, 65: 394–403.
- ▶ Hawkins N, Scott DA, Woods BS, Thatcher N: No study left behind: a network meta-analysis in non-small-cell lung cancer demonstrating the importance of considering all relevant data. *Value Health* 2009, 12: 996–1003.
- ▶ Salanti G, Marinho V, Higgins JP: A case study of multiple-treatments meta-analysis demonstrates that covariates should be considered. *J Clin Epidemiol* 2009, 62: 857–864.
- ▶ Hoaglin DC, Hawkins N, Jansen JP, Scott DA, Itzler R, Cappelleri JC *et al.*: Conducting indirect-treatment-comparison and network-meta-analysis studies: report of the ISPOR Task Force on Indirect Treatment Comparisons Good Research Practices: part 2. *Value Health* 2011, 14: 429–437.
- ▶ Chaimani A, Higgins JPT, Mavridis D, Spyridonos P, Salanti G: Graphical tools for network meta-analysis in STATA. *under revision*.
- ▶ Ioannidis JP: Indirect comparisons: the mesh and mess of clinical trials. *Lancet* 2006, 368: 1470–1472.
- ▶ Jonas DE, Wilkins TM, Bangdiwala S, Bann CM, Morgan LC, Thaler KJ *et al.*: Findings of Bayesian mixed treatment comparison meta-analysis: comparison and exploration using real-world trial data and simulation. (Prepared by RTI-UNC Evidence-Based Practice Center under Contract No. 290–2007–10056–I). *AHRQ* 2013, Publication No. 13–EHC039–EF. Rockville, MD: Agency for Healthcare Research and Quality.
- ▶ Salanti G, Ades AE, Ioannidis JP: Graphical methods and numerical summaries for presenting results from multiple-treatment meta-analysis: an overview and tutorial. *J Clin Epidemiol* 2011, 64: 163–171.
- ▶ Senn S, Gavini F, Magrez D, Scheen A: Issues in performing a network meta-analysis. *Stat Methods Med Res* 2013, 22: 169–189.