

# Targeting respiratory antibiotics – the role of diagnostics

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# Respiratory antibiotics

- ▶ GPRD data 568 practices 2010–11
- ▶ Median prescribing rates
  - 48% for ‘cough and bronchitis’
  - 60% for ‘sore throat’
  - 60% for ‘otitis–media’
- ▶ Median for RTI 54% (39–69%) lowest/highest

# Antibiotic and symptoms vs natural history (NICE)

- Evidence from RCTs, systematic reviews

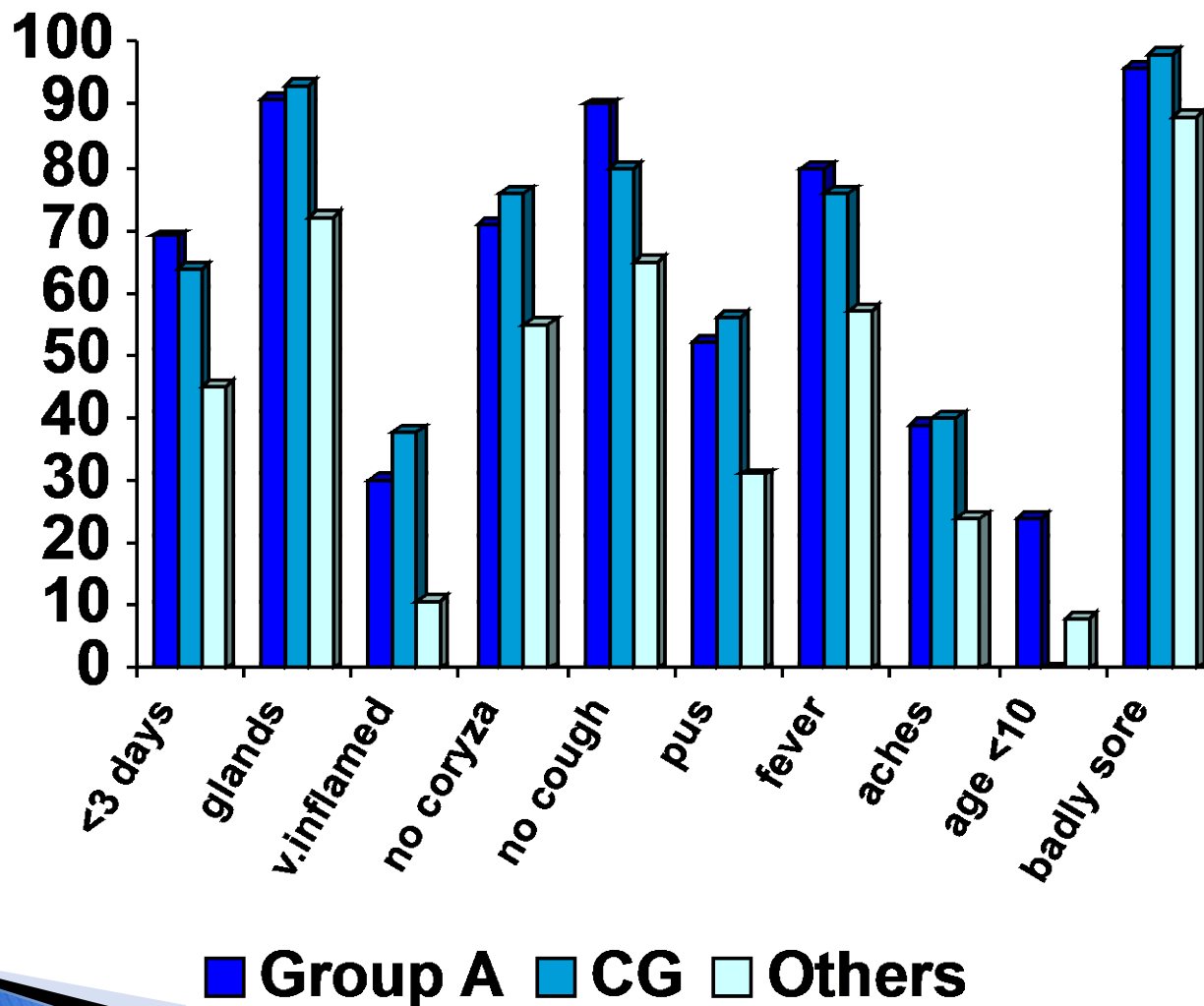
	prior duration	<i>duration after seeing doctor</i>	total duration untreated	Benefit from antibiotics	NNT
otitis media	1-2 days	3-5 days	4 days	8-12 hours	18
sore throat	3 days	5 days	8 days	12-18 hours	10-20
sinusitis	5 days	7-10 days	12-15 days	24 hours	13
bronchitis	10 days	10-12 days	20-22 days	24 hours	10-20

# PRISM: Delayed/Score/RADT

	Delayed (control)	FeverPAIN	RADT
Severity sore throat/diff swallowing (Days 2-4; 0 no ..3 mod bad; ... 6 as bad as it could be)	3.11	-0.33* (-0.64 to -0.02)	-0.30 (-0.61 to 0.004)
Duration (moderately bad or worse Sx)	Median 5 days	HR 1.30* (1.03 to 1.63 )	HR 1.11 (0.88 to 1.40)
Antibiotic use	75/164 (46%)	RR 0.71* (0.05 to 0.95)	RR 0.73* (0.52 to 0.98)
Belief ( <i>not</i> likely to need seeing Dr in future)	62/163 (38%)	RR 0.97 (0.71 to 1.27)	RR1.03 (0.76 to 1.32)
*=p<0.05			

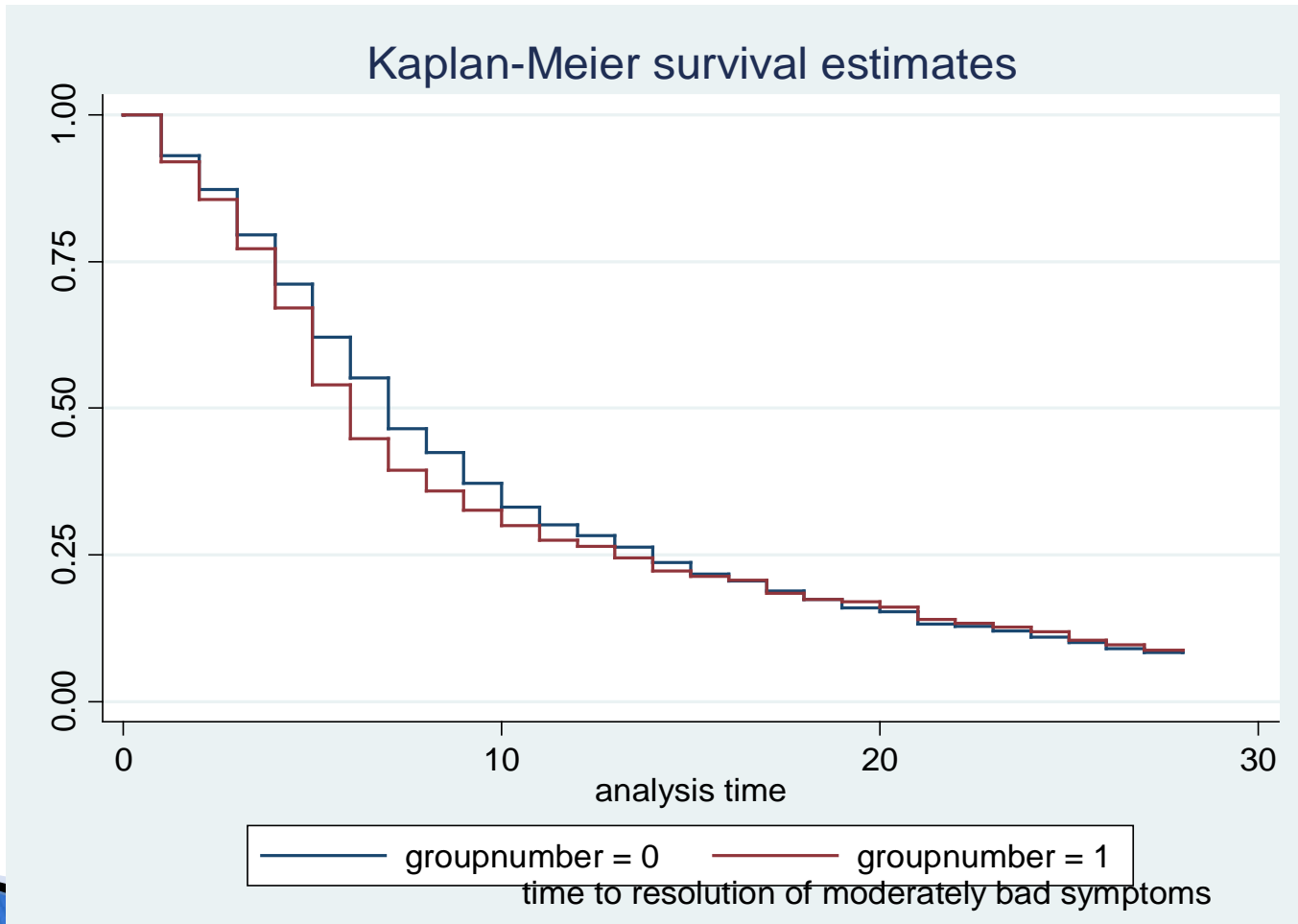
All models controlled for fever and symptom severity at baseline  
No difference in returns within one month or following

# Are C+G important?

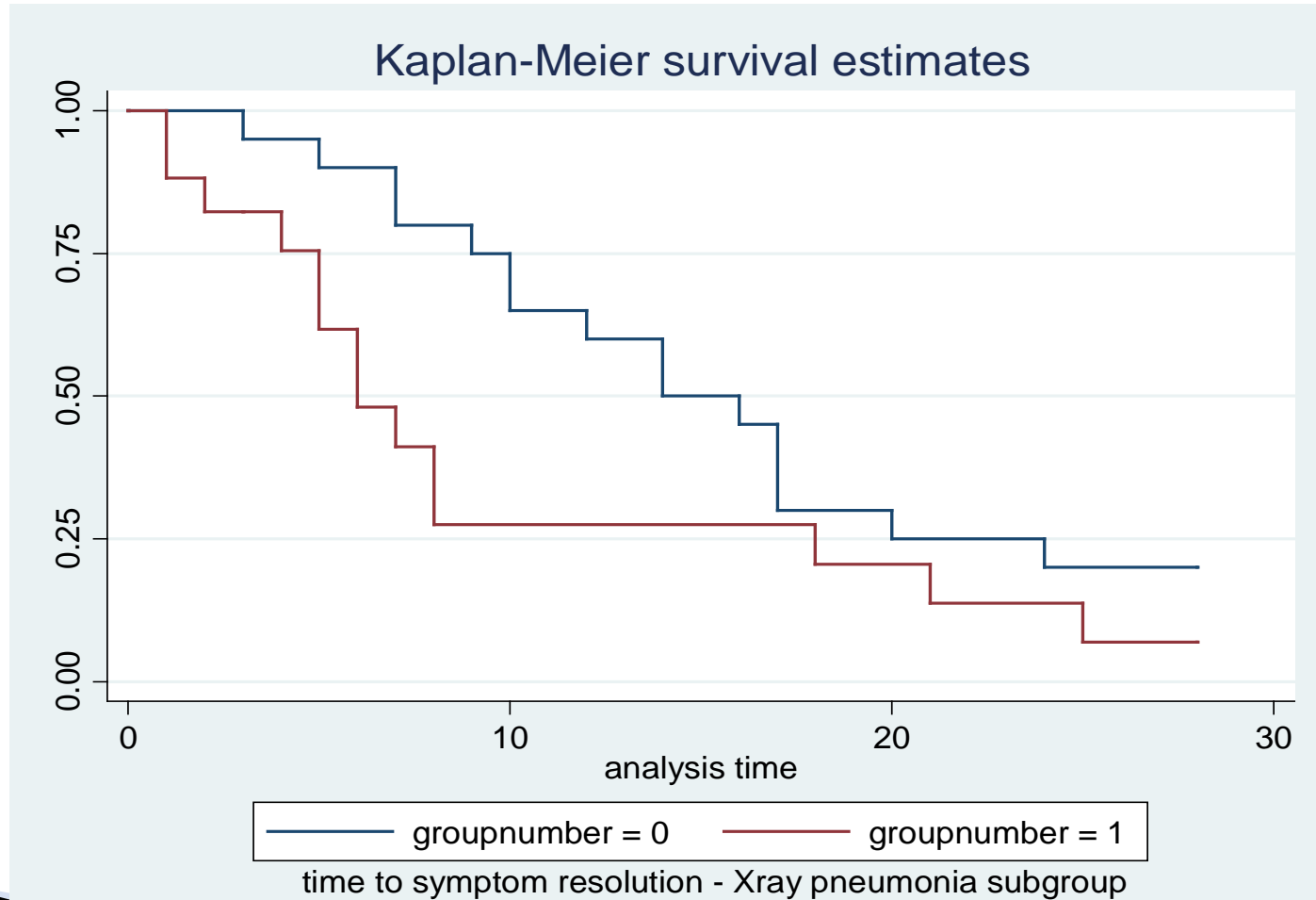


# GRACE: Antibiotic/placebo in LRTI

## Resolution of moderately bad symptoms

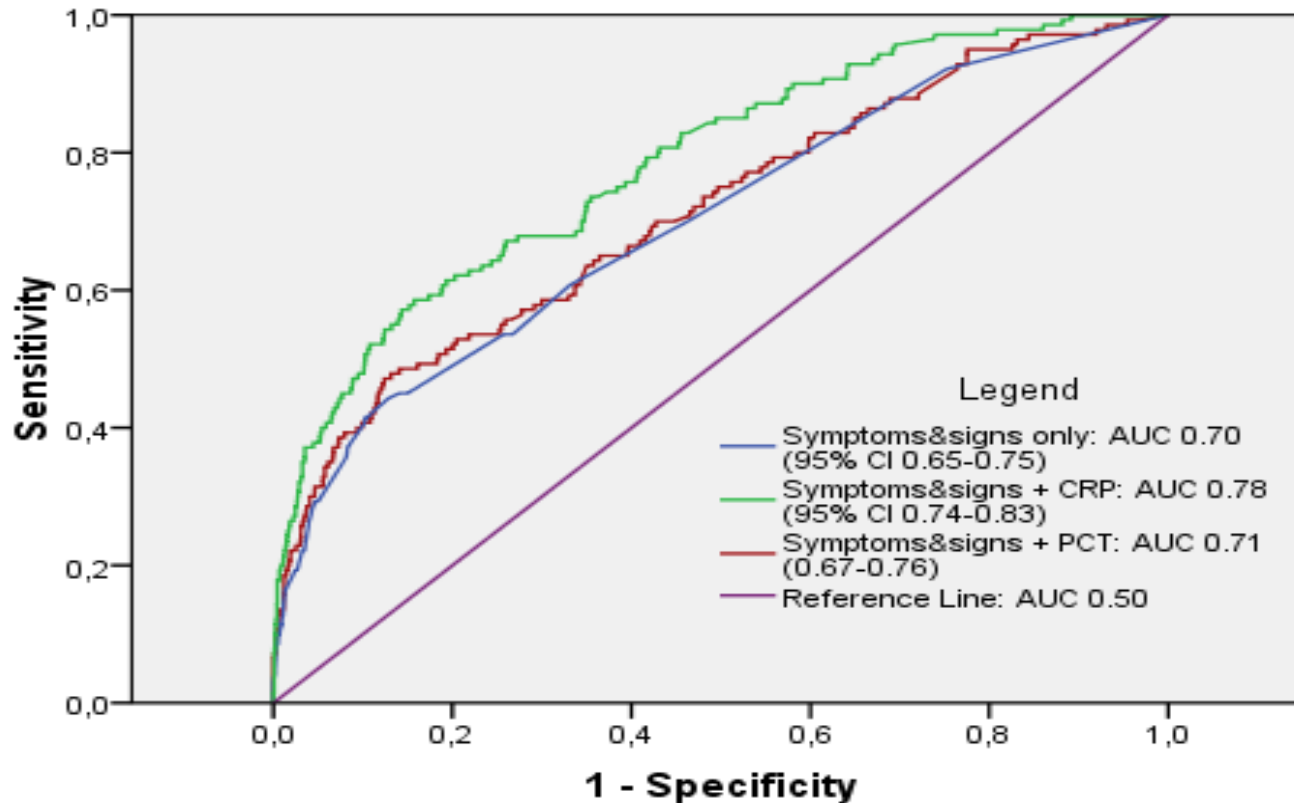


# X ray pneumonia



# How to spot pneumonia: The role of CRP

ROC Curve



Diagonal segments are produced by ties.



# Conclusion

- ▶ Overuse of antibiotics for RTI
  - ▶ Limited benefit for symptoms
  - ▶ Spotting the few who would benefit
  
  - ▶ Strep ACG rapid tests for sore throat
  - ▶ Improving precision of diagnosis of pneumonia
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