**Tucker 2017** previous study 14/170 (8.2%) pts allergic with skin test

this study 4/155 (2.6%) pts allergic w/ amoxicilin challenge BUT NO PRIOR SKIN TEST

**Davis 2016** orthognathic surgery; SSI's and antibiotics

6.2% SSI prevalence Cefazolin; 14.3% PCN; 10.4% clindamycin

Stats for hx risk??

**Murphy 2017** osteomyocutaneous free flap tissue transfer surgery

Ampicillin+sulbactam, cefazolin, clindamycin (least to greatest rate of SSI's)

p\_SSI\_cefaz= 7/16=0.438

p\_SSI\_alternative= 14/22=.636

amp+sulb= 0.28 (16/58)

**Vaisman 2017** 485 total; 117 had allergy (24.1%), so remaining 368 (75.9%) did not have allergy and should receive cefaz

only 267 (55.1%) actually received cefaz of the 485; ie prob\_cefaz was 267/368= 72.6%

so communication error was 20.8% (101)

p\_cefaz\_hx= .551 of 485= 267

**Park 2006** no challenge; .644 pts received cefaz (out of total 1111 that received eval, but some not eligible for ST) 716/1030=.70 1030 underwent skin testing

p\_ST\_eligible= 1030/1111=.927 62 of the ineligible, advised to avoid cefaz 19/81 ineligible, determined not allergic because those 19 not advised not avoid cefaz?? So add branch for cefaz if ineligible but not allergic??

p\_ST\_pos= 43/1030=.0417 if had PCN allergy history, 3/43 advised not allergic (still receive cefaz) for ST+, but this is only for group of sole PCN history?? So include new branch for Cefaz still recommended?

p\_ST\_ind=14/1030=.0136 43 ST pos

p\_ST\_neg=973/1030=0.945

p\_cefaz\_not\_allergic=716/1111=.644 overall given cefaz from eval

p\_ADR\_cefaz=0/9+4/669=4/678 0 of 9 of 43 with ST pos given cefaz had ADR; but then 4 with ST negative did ??should I use this data for ADR even though it's not the full evaluation (no drug challenge)??

p\_alternative\_ST\_pos=34/43 9/43 got cefaz with pos ST, so 34 got alternative

p\_cefaz\_recommended\_ST\_pos=3/43 (new input, include? Cefaz still recommended)) ??Fig 1 doesn't line up with 34/43 number

p\_cefaz\_comm\_error\_ST\_pos=6/43

p\_cefaz\_recommended\_ST\_indeterminate= 2/10 ??so get prob of cefaz if indeterminate separately? however, 3 advised to get it, and 6 (or 3?) advised not to, so include this comm error as new input??

p\_cefaz\_comm\_error\_ST\_indeterminate= 1/10 no patients who received cefaz from indeterminate got ADR; Are we including ADR probability based on this??

p\_alternative\_ST\_indeterminate=7 /10 1 told to receive cefaz, but got alternative (Fig 1)

p\_cefaz\_ST\_neg= 669/946 ??again, should I split between those recommended to receive cefaz based on history

p\_ST\_ineligible=81/1111

p\_get\_cefaz\_ineligible\_ST= 20/81=.247 ??Are we just lumping this into same probability of cefaz if no eval?

1 of these 20 that received cefaz got ADR (hypotension)

**Moussa 2018** 146 got ST + challenge but 48 got just skin test (so 194 ST total) ??19 did not require antibiotics (and still underwent surgery) ? Why

p\_ST\_eligible= 1.0

p\_ST\_pos= 4/194=.0206

p\_ST\_ind=0

p\_ST\_neg=190/194=.979 for 44 pts, no drug challenge because negative ST and weak history enough to assume not allergic? Keep track of this?

p\_alternative\_ST\_pos=4/4=1.0

p\_CH\_pos=7/146=.0479

p\_ADR\_allergic= ??2 of 7 not allergic (see pg 5, doesn't say if allergic)?? (Table 2)

p\_rxn\_major=

p\_death\_anaphylaxis= cefaz given in 102/120 surgeries

p\_alternative\_CH\_pos=5/7=.714

p\_cefaz\_ST\_neg=18/44

p\_cefaz\_not\_allergic=120/194=.619 or 122/194?? 122? (see pg 5: extra two received cefaz from positive challenge?)

p\_cefaz\_CH\_pos=2/7=.286

p\_cefaz\_CH\_neg=102/120 or 102/139? ??19 excluded of 139? So 120 left? So 102/120 or 102/139?

**Blumenthal 2017 poster**

p\_ST\_eligible=48/49 1 person unwarranted due to history, was this patient the one who received cefaz??

p\_ST\_pos=0/48

p\_ST\_neg=48/48

p\_cefaz\_not\_allergic=47/48=0.98

p\_cefaz\_if\_ST\_ineligible=1.0?

**McDanel 2017** 154 pts seen in DAC and had surgery; 140 got skin tested and 25 got challenged 25 had challenge

p\_ST\_eligible=140/154=.909 140 pts cleared to get cefaz

p\_ST\_pos=0/140

p\_ST\_ind=1/140

p\_ST\_neg=139/140

p\_alternative\_ST\_pos=1.0 What is "not cleared to receive?": 10 received alternative and not cleared for cefaz, 6 not cleared for cefaz but still received (so 16 total allergic??)

p\_CH\_pos=0/25=0 no reactions 14 cleared for cefaz, received alternative

p\_alternative\_CH\_pos=?

p\_cefaz\_not\_allergic=139/154=.903

p\_cefaz\_CH\_pos\_notallergic=?

**Blumenthal CID 2017** HPRO, KPRO stats (taken from Yu's table, not in paper)

p\_SSI\_cefaz: .0107 of 2236= 24 HPRO

p\_SSI\_alternative: .0180 of 388 = 7 HPRO

p\_SSI\_cefaz: .0086 of 2097 = 18 KPRO

p\_SSI\_alternative: .0234 of 342 = 8 KPRO

p\_cefaz\_noeval=.122 of 922= 112

**Finkelstein 2002** cardiac stats, shown that cefaz and vanc not different in terms of SSI's, should we trust this study??

**Gomez 2018** showed that antibiotic prophylaxis (including cefaz) not better than placebo for preventing SSI for elective laparoscopic cholecysectomy

**Tan 2015** shows that Vanc alone does not affect the odds of SSI's than cefaz for total joint arthroplasties; also Vanc assoc with reduced risk of Graham positive and resistant organisms

however, still agrees that vanc should only be used in patients who require vanc and not first line therapy of cefaz

**Miliani 2009** 2.1% number?? For SSI risk with cefaz

**Hawn 2013** Orthopedic, colorectal, vascular procedures

p\_SSI\_cefaz: .014 of 16816=231 Ortho; Table 2

p\_SSI\_alternative: .018 of 3712= 67 Ortho; Table 2 (add up 3 rows)

p\_SSI\_cefaz: .133 of 4261 (456+3010+795)=565 Colon; Table 2

p\_SSI\_alternative: .116 of 1208 (40+385+360+37+332+54) = 140 Colon; Table 2 (add up)

p\_SSI\_cefaz: .089 of 4193= 373 Vascular; Table 2

p\_SSI\_alternative: .0998 of 942= 94 Vascular; Table 2 (add up)

**Ponce 2014** HPRO, KPRO stats (primary arthroplasties)

p\_SSI\_cefaz: .131 of 16484 = 216 Table II

p\_SSI\_alternative: .0188 of 2346 = 44 Table II

**Davis 2016** Orthognathic surgery

p\_SSI\_cefaz: .062 of 1627 = 100 Table 3

p\_SSI\_alternative: .104 of 270 = 28 Table 3

**Engemann 2003** Death SSIs; results section > mortality subsection

p\_death\_SSI= .067 of 165= 11 (90-day) MSSA

p\_death\_SSI = .207\*121=25 (90-day) MRSA

p\_death\_SSI= .021 of 193= 4 other causes

**Anderson 2009** Death SSI's, table 2

p\_death\_SSI= .167 of 150= 25 (only 90-day mortality) MRSA

p\_death\_SSI = .20 of 150 = 30 (adding those died during admission) MRSA

p\_death\_SSI= .07 of 128 = 9 (only 90-day mortality) MSSA

p\_death\_SSI= .0781 of 128= 10 (adding those died during admission) MSSA

p\_death\_other= .03 of 231 = 7 (only 90-day mortality) other causes

p\_death\_other= .0390 of 231 = 9 (only 90-day mortality) other causes

**McGarry 2004** Death SSIs, Table 2

p\_death\_SSI = .219 of 96= 21 (elderly) Staphylococcus aureus

p\_death\_other= .051 of 59 = 3 Staphylococcus aureus

p\_death\_SSI = .053 of 131= 7 (youth) Staphylococcus aureus

**Cosgrove 2005** Death SSI's, Results section (see highlights)

p\_death\_SSI = .229 of 96 = 22 MRSA

p\_death\_SSI= .198 of 252 = 50 MSSA

**Blumenthal MSSA**

p\_ADR\_alternative\_allergic=.03 (baseline) Table 1- vanc; 2 sources

p\_rxn\_major= .083 (baseline) Vanc major rxn; 1 source

p\_ADR\_cefaz\_allergic= .016 (baseline, 5 sources, this was given the condition of neg ST!) ??Are we separating this from prob of ADR from alternative drug given being allergic? Or we can combine this with cefaz prob of ADR being allergic below

p\_ADR\_cefaz=.044 (baseline) Table 1- 3 sources

p\_ADR\_alternative= .053 (baseline) Table 1- vanc; 3 sources

p\_rxn\_major= .047 (baseline) Cefaz major rxn; 2 sources

p\_death\_anaphylaxis= .002 (baseline) Table 1- 4 sources

p\_ST\_eligible= .909 (baseline) Table 1- 2 sources

p\_ST\_pos= .012 (baseline) Table 1- 5 sources

info about patients without anaphylactic PCN history who react to cefaz?

info about patients with PCN allergy whose rxn has anaphylactic features?

mortality numbers for cefaz MSSA vs alternative drug MSSA?

**Vyles 2017** low risk history, Figure 1

p\_high\_risk = 1- (434/597) = 1- 0.727=0.273 ? I know the abstract says 51% but this is including those who are eligible for ST, and I think we are just using those who have overall low risk history