



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

# Diagnosi invasiva oggi: quali sono i rischi reali

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# Rischi di amniocentesi e CVS: i primi studi e gli unici randomizzati

	<b>Risk difference</b>	<b>RR (95% CI)</b>
Tabor et al: amniocentesis Lancet. 1986 7;1(8493):1287-93	1.0 %	2.3 (1,0-3,4)
Smidt-Jensen et al: CVS vs amnio Lancet. 1992 21;340(8830):1237-44	-0.6 %	0.90 (0,7-1,23)



# Pregnancy loss rates after amniocentesis: a contemporary prospective trial

Eddleman et al: Obstet Gynecol. 2006 Nov;108(5):1067-72

	<b>Risk difference</b>	<b>RR (95% CI)</b>
3066 amnio vs 31907 controlli provenienti studio FASTER	0.06 %	1.1 (0.7-1.5)

**CONCLUSION:** (...)There was no significant difference in loss rates between those undergoing amniocentesis and those not undergoing amniocentesis



# Miscarriage following amniocentesis and CVS: a systematic review and meta-analysis

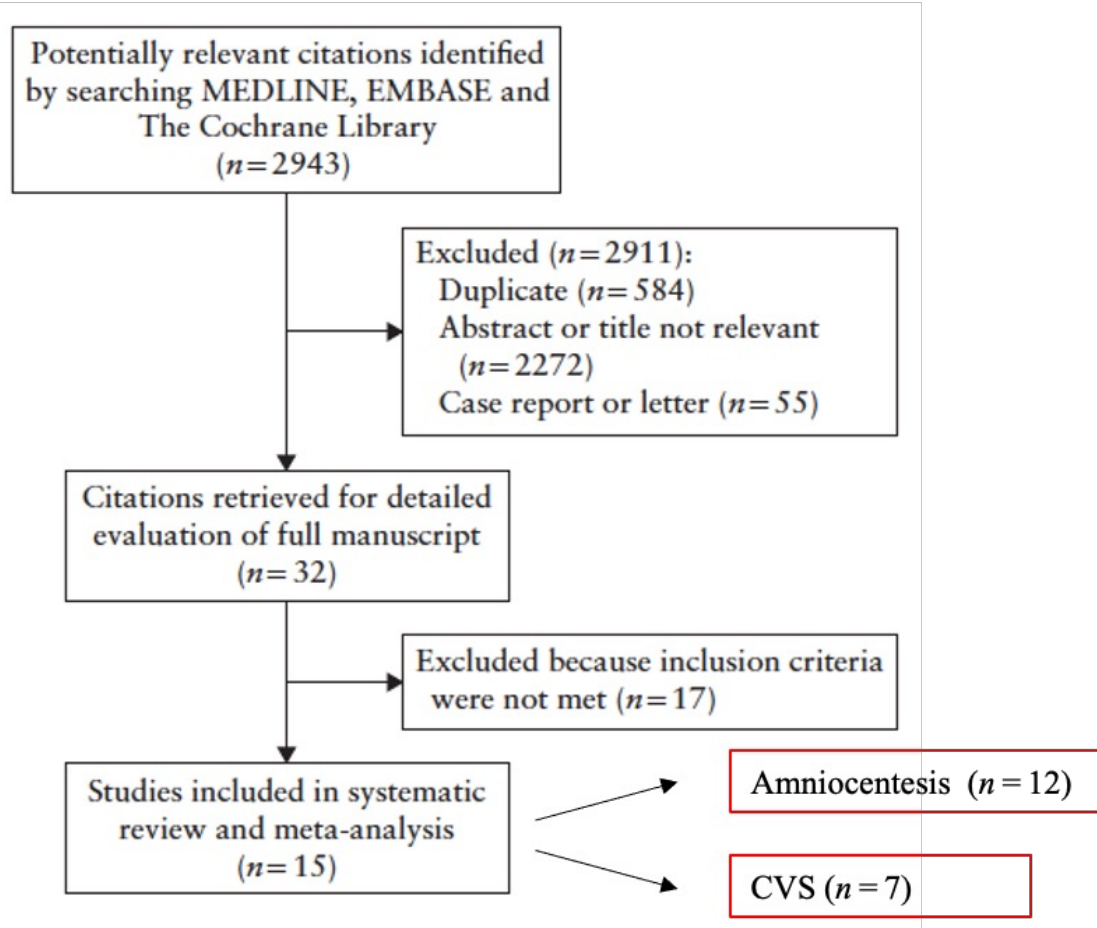
Akolekar et al: *UOG* 2015; 45: 16–26

	<b>Risk difference</b>	<b>95 % CI</b>
Amniocentesis n = 42716	0.11 %	-0.04 – 0.26 %
CVS N = 8899	0.22 %	-0.71 – 1.16 %



# Risk of miscarriage following amniocentesis or CVS: systematic review of literature and updated meta-analysis

Salomon et al., UOG 2019, 2019; 54: 442–451

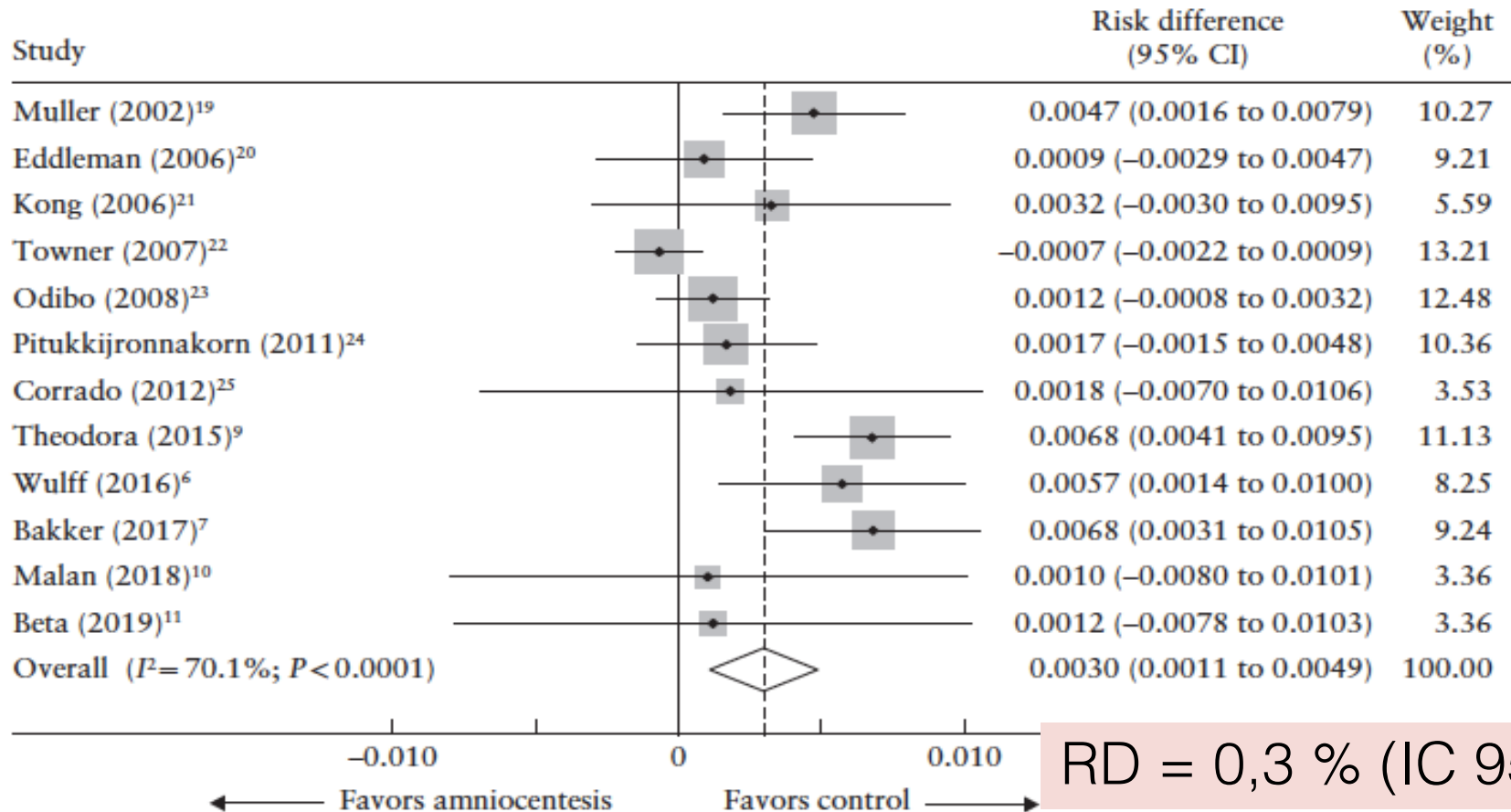


- 17 studi controllati dal 2000
- 63723 amnio e 330469 controlli
- 13011 CVS e 22680 controlli



# Risk of miscarriage following amniocentesis

Salomon et al., UOG 2019, 2019; 54: 442–451

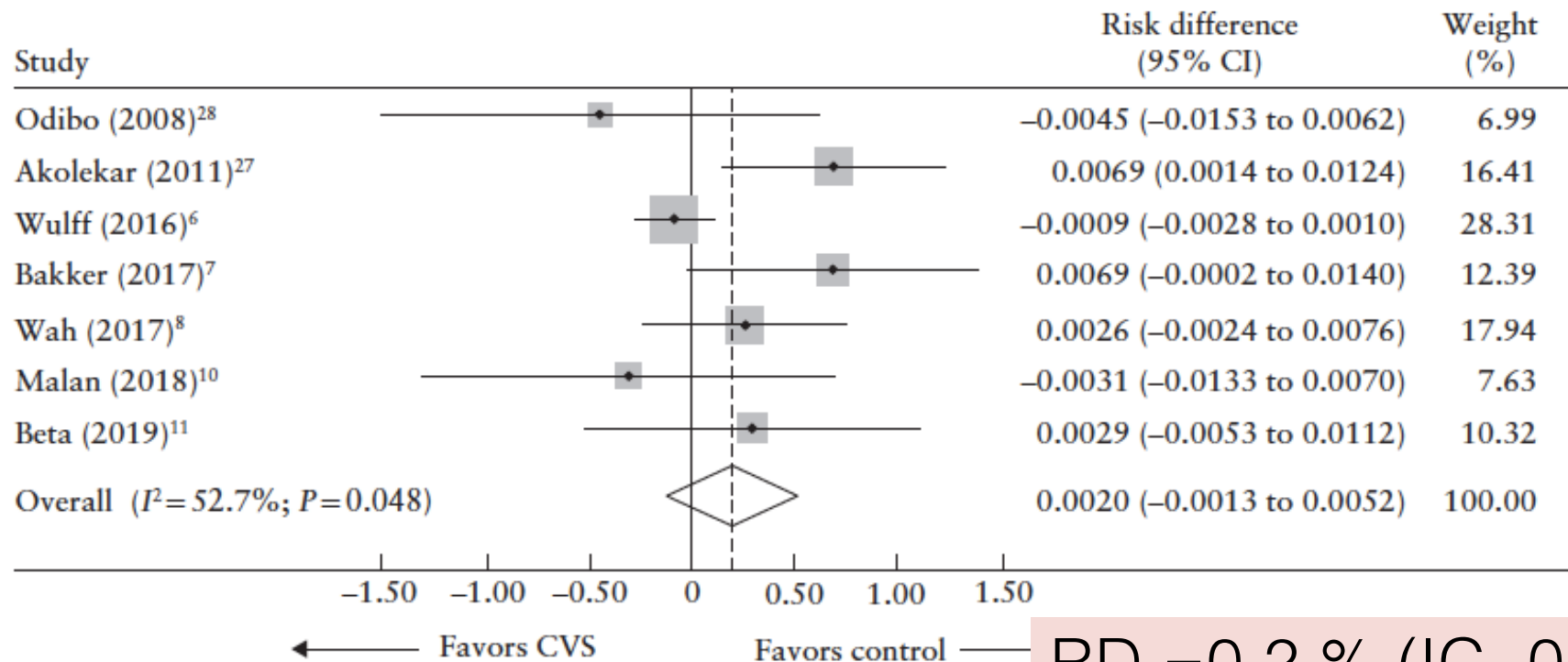


RD = 0,3 % (IC 95% 0,11-0,49 %)



# Risk of miscarriage following CVS

Salomon et al., UOG 2019, 2019; 54: 442–451



RD = 0,2 % (IC -0,13 - 0,5%)



# Miscarriage in fetuses viable at 11-13 weeks

Akolekar et al: Prenat Diagn 2011; 31:38-45

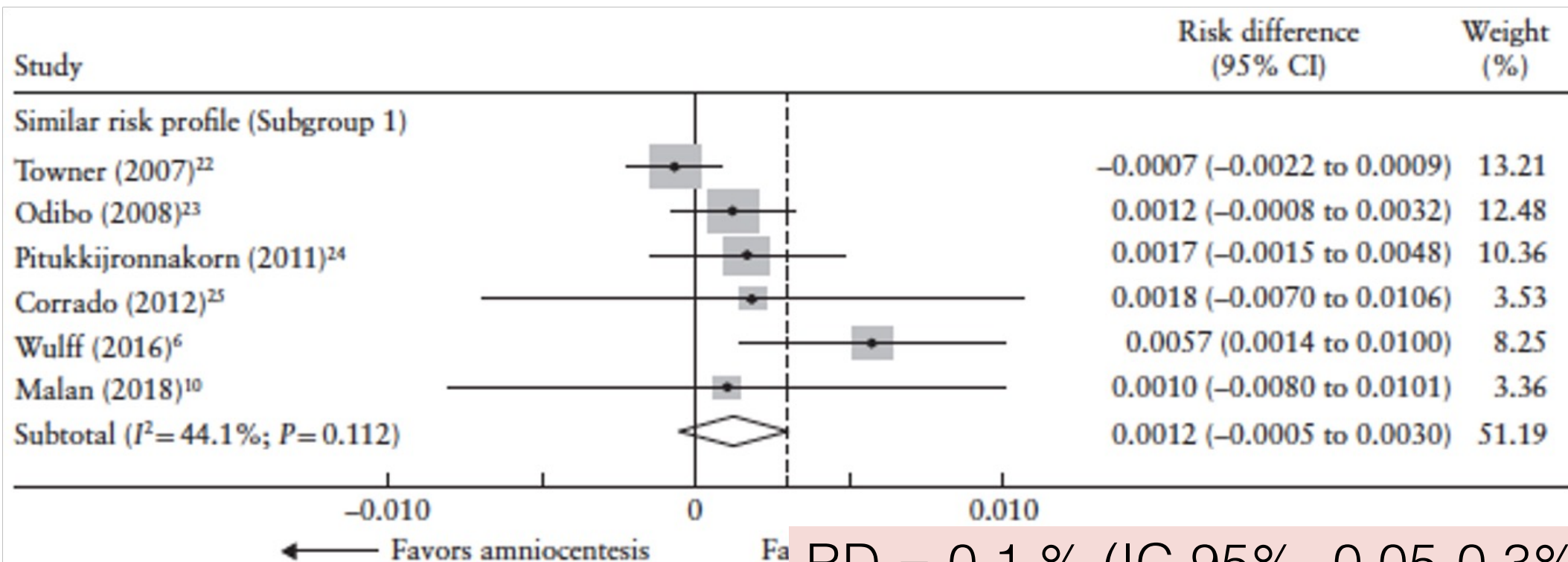
- Overall miscarriage rate: 1.2 %
- Variables associated with an increased risk:
  - Maternal weight
  - Maternal age
  - African and mixed racial origin
  - Pre-existing diabetes mellitus
  - Ovulation induction
  - Increased NT
  - Decreased PAPP-A
  - Reversed A-wave in ductus venosus





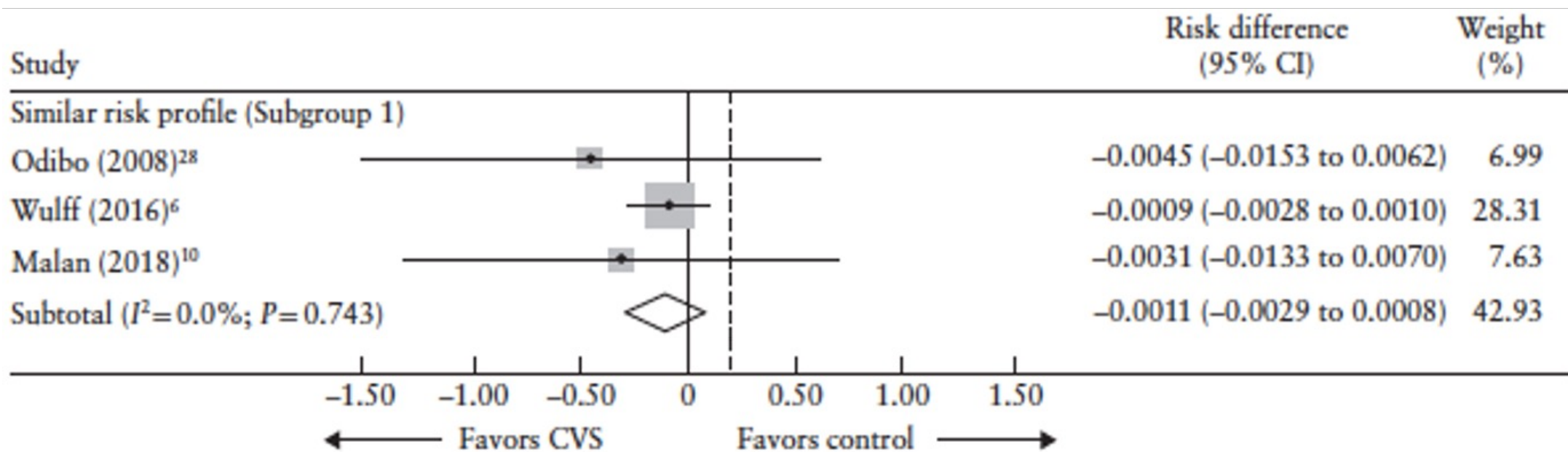
# Risk of miscarriage following amniocentesis in patients with *similar* risk of miscarriage

Salomon et al., UOG 2019, 2019; 54: 442–451



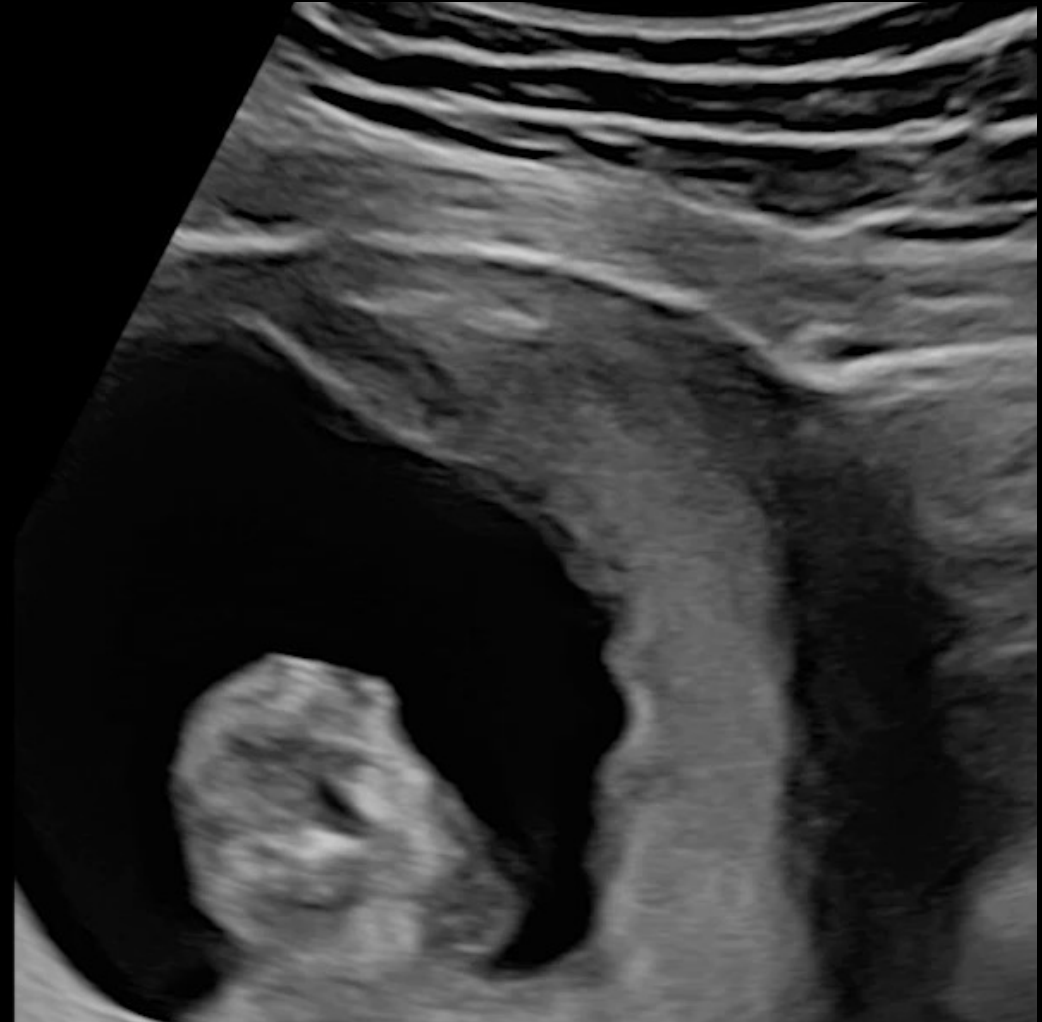
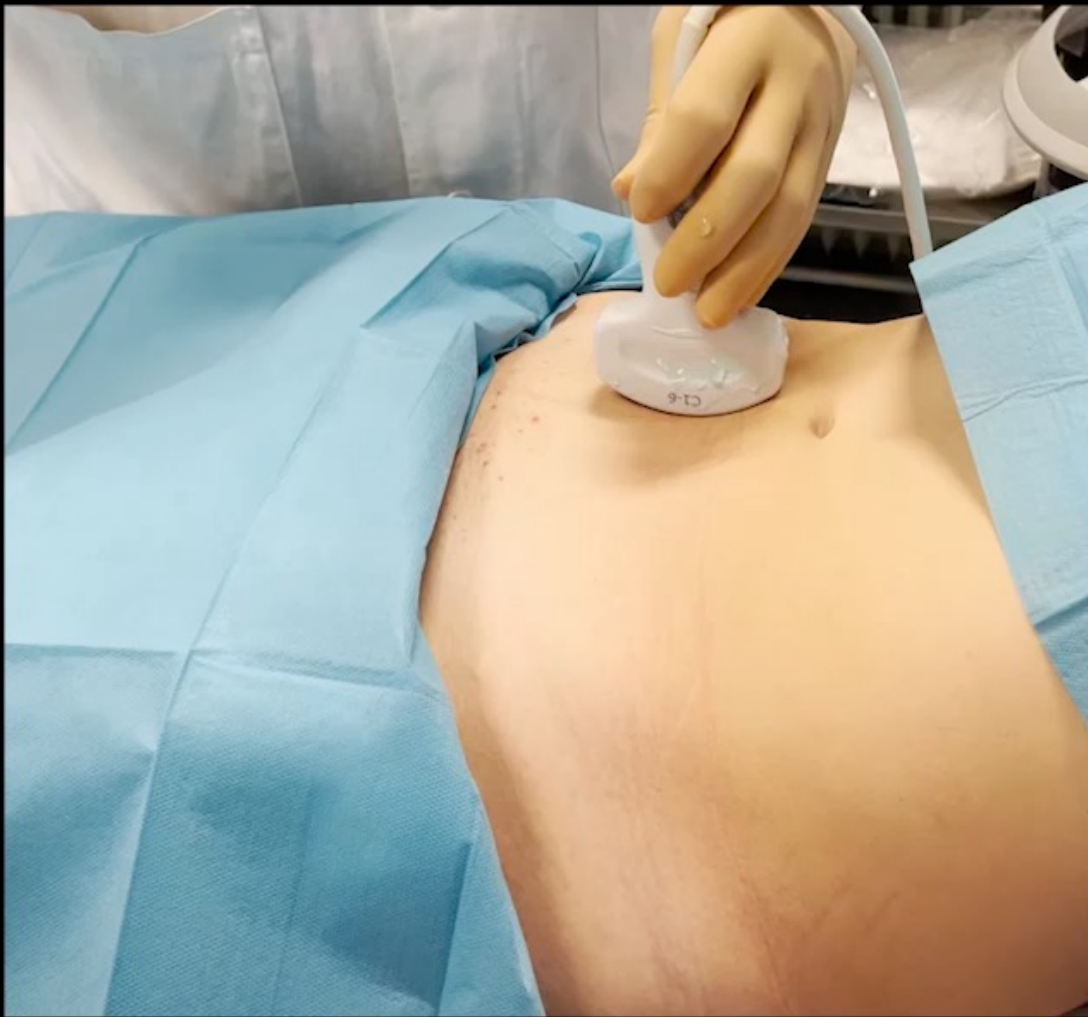
# Risk of miscarriage following CVS in patients with *similar* risk of miscarriage

Salomon et al., UOG 2019, 2019; 54: 442–451



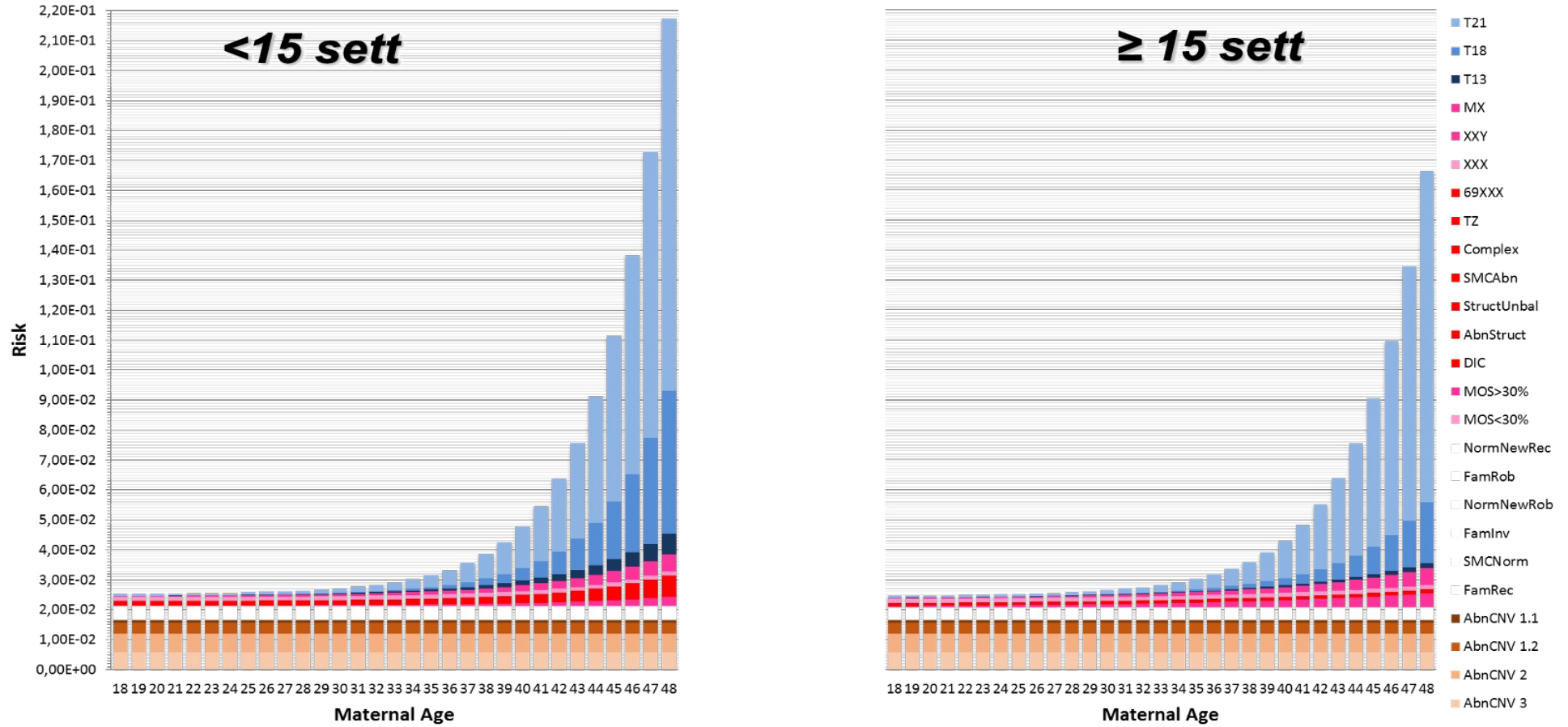
RD = - 0,1 % (IC 95% -0,29 – 0,08 %)





# Prevalence of chromosomal anomalies in low risk population

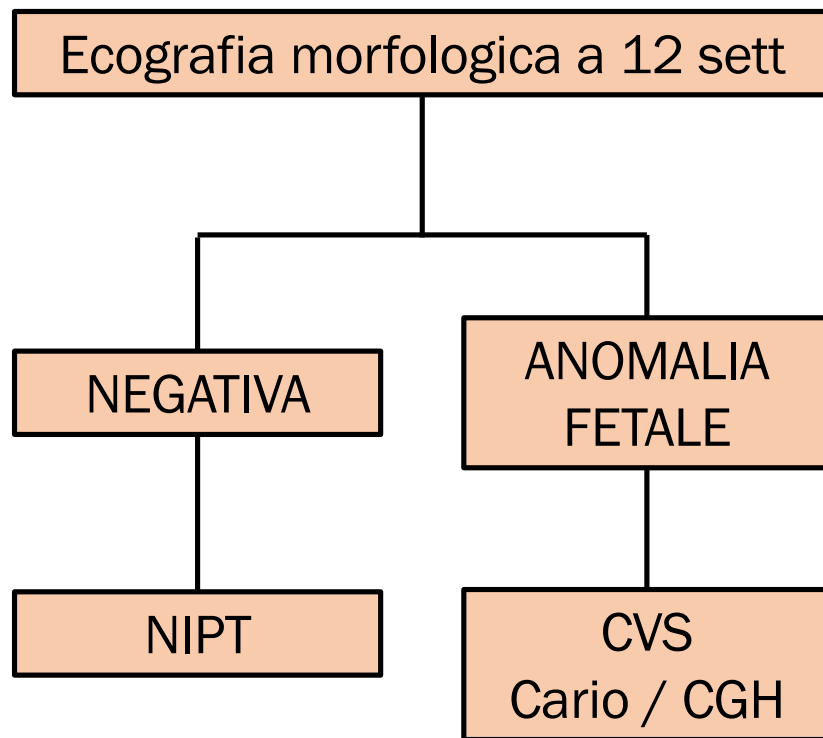
*courtesy F. Grati, TOMALAB*



Hecht and Hook, 1994 – T21; Wapner et al., 2012 – arrayCGH; Grati, Ferreira et al., manuscript in preparation



# Percorsi possibili per pazienti con interesse per diagnosi prenatale patologia congenita



Ecografia morfologica a 12 sett  
+ CVS per cario/CGH



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