Study			<b>Risk of bias</b>	Applicability concerns				
	Patient selection	Index test	Reference standard	Flow and timing	Role and impact of sponsor	Patient selection	Index test	Reference standard
Alberti 2015[56]	High	High	Low	High	Low	Unclear	Low	Low
Ashoor 2012[46]	High	Unclear	Low	High	Unclear	Low	Low	Low
Beamon 2014[36]	High	Low	Low	High	Low	High	Low	Low
Bevilacqua 2015[37]	Unclear	Low	Low	High	High	High	Low	Low
Bianchi 2012[47]	High	Low	Low	High	High	High	Low	Low
*Bianchi 2014[19]	Unclear	Unclear	Low	High	High	High	High	Low
Chen 2011[48]	High	Unclear	Low	Low	High	Unclear	Low	Low
Chiu 2011[49]	High	Low	Low	High	High	High	Low	Low
Comas 2014[38]	High	Low	Low	High	High	High	Low	Low
Dan 2012[63]	Unclear	Unclear	Low	High	High	High	Low	Low
Del Mar Gil 2013 [21]	Unclear	Unclear	Unclear	High	Unclear	Low	Low	Low
Dhallan 2007[57]	High	Unclear	Low	Low	High	High	High	Low
Ehrich 2011[50]	High	High	Low	High	High	High	Low	Low
Hall 2014[51]	High	Unclear	Low	High	High	High	High	Low
Huang 2014[22]	Unclear	Unclear	Low	Low	High	High	Low	Low
Jeon 2014[39]	Unclear	High	Low	Low	Low	High	Low	Low
Jiang 2012[23]	Unclear	Unclear	Low	Low	High	High	Low	Low

## Supplement 7 Study quality according to QUADAS-2[7]

Study			Risk of bias	Applicability concerns				
	Patient selection	Index test	Reference standard	Flow and timing	Role and impact of sponsor	Patient selection	Index test	Reference standard
Korostolev 2014[40]	Unclear	Low	Low	High	Low	High	Low	Low
Lau 2012[24]	Unclear	Low	Low	Low	Unclear	Low	Low	Low
Lau 2014[25]	Low	Unclear	Low	High	Unclear	High	Low	Low
Liang 2013[26]	Unclear	Low	Low	High	Low	High	Low	Low
*Nicolaides 2012[27]	Unclear	Low	Low	High	Unclear	High	Low	Low
Nicolaides 2013[28]	Unclear	Unclear	Low	High	Unclear	Low	Low	Low
Norton 2012[29]	Unclear	Low	Low	High	High	High	Low	Low
*Norton 2015[6]	Unclear	Low	Low	High	High	High	Low	Low
Palomaki 2012[52]	High	High	Low	High	High	High	Low	Low
Pergament 2014[30]	Unclear	High	Low	High	High	High	Low	Low
Porreco 2014[31]	High	Low	Low	High	High	High	Low	Low
*Quezada 2015[41]	Unclear	Low / High\$	Low	High	Unclear	High	Low	Low
Sago 2014[42]	High	Low	Low	High	Unclear	Unclear	Low	Low
Sehnert 2011[53]	High	Low	Low	High	High	High	Low	Low
Shaw 2014[32]	Unclear	Low	Low	Low	Unclear	High	Low	Low
*Song 2013[33]	Unclear	Low	Low	High	Low	High	High	Low

Study			<b>Risk of bias</b>	Applicability concerns				
	Patient selection	Index test	Reference standard	Flow and timing	Role and impact of sponsor	Patient selection	Index test	Reference standard
Song 2015[45]	Unclear	Low	Low	High	Unclear	Low	Low	Low
Sparks 2012[54]	High	High	Low	High	High	High	Low	Low
Stumm 2014[34]	Low	Low for DAP.21 High for DAP.plus**	Low	High	High	High	Low	Low
Verweij 2013[35]	Low	Low	Low	High	High	High	Low	Low
Wax 2015[43]	Low	Unclear	Low	High	Low	Unclear	Low	Low
Zhang 2015[5]	Unclear	Unclear	Low	High	High	High	Low	Low
Zhou 2014[44]	Unclear	Unclear	Low	High	Unclear	High	Low	Low
Zimmermann 2012[55]	High	High	Low	High	High	High	High	Low

\* Studies comparing NIPT with conventional screening tests for T21, T18 and T13 (addressing Research question 2)

\*\* A second algorithm was used for T18 and T13 during the study which was unblinded. <sup>\$</sup> In this study the combined test (as comparator) was also assessed.