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Objectives: To assess the developmental competence and clinical outcomes of 1PN-derived embryos

	N° of 1PN	N° of 2PN	N° of studies	OR (95% CI)	P-value
Cleavage Rate	2556	25977	2	0.17 (0.12-0.24)	P<0.00001
Good Quality Embryos	347	9318	4	0.86 (0.42-1.73)	P=0.67
Blastulation Rate	7039	31216	7	0.25 (0.17-0.36)	P=<0.0001
Good Quality Blastocysts	1183	49696	5	0.44 (0.18-1.07)	P=0.07
Euploidy Rate	6302	28270	4	0.98 (0.40-2.38)	P=0.96
Abnormal Ploidy Constitution	170	9797	3	2.88 (0.87-9.48)	P=0.08
Clinical Pregnancy Rate	1917	39343	13	0.73 (0.62-0.87)	P=0.0002
Live Birth Rate	1867	37703	13	0.76 (0.62-0.94)	P=0.01
Low Birthweight	189	6894	2	0.90 (0.44-1.86)	P=0.78
Malformation Rate	434	9922	7	1.37 (0.57-3.31)	P=0.48
Miscarriage Rate	895	17844	12	1.00 (0.71-1.41)	P=1.00
Sub Analysis: 1PN- and 2PN-derived embryos from a time-lapse system (TLS) cycles					
	N° of 1PN derived embr	N° of 2PN derived embr	N° of studies	OR (95% CI)	P-value
Blastulation Rate	336	3527	3	0.16 (0.09-0.26)	P<0.00001
Good Quality Blastocyst Rate	183	3306	2	0.88 (0.14-5.39)	P=0.89
Sub Analysis: 1PN-derived Embryos from ICSI vs c-IVF					
	N° of 1PN derived embr	N° of 2PN derived embr	N° of studies	OR (95% CI)	P-value
Clinical Pregnancy Rate	285	587	5	0.43 (0.23-0.80)	P=0.007
Live Birth Rate	285	587	5	0.47 (0.22-1.01)	P=0.05
Miscarriage Rate	49	220	5	1.60 (0.74-3.45)	P=0.23
Sub Analysis: Cycles performed elective euploid blastocyst transfer					
	N° of 1PN derived embr	N° of 2PN derived embr	N° of studies	OR (95% CI)	P-value
Clinical Pregnancy Rate	530	2344	2	0.71 (0.36-1.43)	P=0.34
Live Birth Rate	531	2378	3	0.72 (0.37-1.40)	P=0.33

Conclusions: Although 1PN-derived embryos demonstrated reduced developmental competence compared to their 2PN counterparts, they nonetheless exhibited the potential to result in healthy live births. Our findings support the cautiously clinical use of 1PN embryos, particularly when biparental diploidy has been confirmed. These results underscore the need for more flexible and inclusive guidelines regarding the use of 1PN embryos ARTs.