

**Supplementary Table SII** Cycle-specific and cumulative livebirth rates for women<sup>†</sup> who initiated ART treatment for a second ART-conceived livebirth with frozen embryo/s collected in the cycle that resulted the first ART-conceived livebirth (total women: 11,196).

Complete cycle number <sup>¥</sup>	Number of women starting cycle	Number of livebirths	Livebirth rate (%)		
			Cycle-specific (95% CI)	Cumulative Conservative (95% CI)	Cumulative Optimistic (95% CI)
<b>Age-group &lt;30 years</b>					
Remaining frozen*	1,051	522	49.7 (45.6-54.1)	49.7 (46.6-52.7)	49.7 (46.9-52.7)
1	298	146	49.0 (41.7-57.6)	63.6 (60.6-66.5)	74.3 (71.0-77.5)
<b>Age-group 30-34 years</b>					
Remaining frozen*	3,849	1,861	48.4 (46.2-50.6)	48.4 (46.8-49.9)	48.4 (46.8-49.9)
1	1,158	558	48.2 (44.3-52.4)	62.8 (61.3-64.4)	73.2 (71.5-74.9)
2	378	170	45.0 (38.7-52.2)	67.3 (65.6-68.7)	85.3 (83.6-86.9)
3	138	49	35.5 (26.8-47.0)	68.5 (67.0-70.0)	90.5 (88.9-92.0)
4	57	19	33.3 (21.3-52.3)	69.0 (67.5-70.5)	93.7 (92.0-95.1)
<b>Age-group 35-39 years</b>					
Remaining frozen*	4,583	1,982	43.2 (41.4-45.2)	43.2 (41.8-44.7)	43.2 (41.8-44.7)
1	1,437	518	36.0 (33.1-39.3)	54.5 (53.1-56.0)	63.7 (62.0-65.4)
2	594	170	28.6 (24.6-33.3)	58.3 (56.9-59.7)	74.1 (72.3-75.9)
3	297	66	22.2 (17.5-28.3)	59.7 (58.3-61.1)	79.8 (78.0-81.7)
4	147	28	19.0 (13.2-27.6)	60.3 (58.9-61.7)	83.7 (81.7-85.6)
5	95	12	12.6 (7.2-22.2)	60.6 (59.1-62.0)	85.7 (83.6-87.7)
<b>Age-group 35-39 years</b>					
Remaining frozen*	1,661	493	29.7 (27.2-32.4)	29.7 (27.5-31.9)	29.7 (27.6-31.9)
1	518	102	19.7 (16.2-23.9)	35.8 (33.5-38.2)	43.5 (40.6-46.6)
2	262	24	9.2 (6.1-13.7)	37.3 (34.9-39.6)	48.7 (45.4-52.1)
3	160	19	11.9 (7.6-18.6)	38.4 (36.1-40.8)	54.8 (50.9-58.6)
4	95	5	5.3 (2.2-12.6)	38.7 (36.4-41.1)	57.2 (53.0-61.4)
5	59	3	5.1 (1.6-15.8)	38.9 (36.5-41.3)	59.3 (54.7-64.1)

<sup>†</sup> Women who conceived their first livebirth following ART treatment performed in 2009-2013, Australia and New Zealand, and treatment followed up until 31 December 2015.

\*Cycle that initiated with the frozen embryos collected in the cycle that resulted the first ART-conceived livebirth.

¥A complete cycle is defined as all embryo transfer events associated with an ovarian stimulation.

Note: Cumulative livebirth rates were only calculated when at least 50 women had commenced an ovarian stimulation cycle for particular cycle count.