

## Supplementary material

**Table A1. Summary of the training dataset. For each video, the image size, the number of annotated frames, and the mean occurrence of the placental vessel are presented. Key: FO - Frame Occurrence, VO - Vessel Occurrence**

No.	Video name	Size (pixels)	No. of frames	FO (frame)	VO (%)	Type of placenta
1.	A_Video001	470 × 470	152	152	10.9	posterior
2.	A_Video002	540 × 540	153	153	6.3	posterior
3.	A_Video003	550 × 550	117	117	10.7	posterior
4.	B_Video004	480 × 480	100	100	7.1	posterior
5.	B_Video005	500 × 500	100	100	16.9	anterior
6.	B_Video006	450 × 450	100	100	16.5	posterior
7.	A_Video007	640 × 640	140	140	10.3	anterior
8.	A_Video008	720 × 720	110	105	6.0	anterior
9.	A_Video009	660 × 660	105	104	19.4	anterior
10.	B_Video011	380 × 380	100	100	7.0	posterior
11.	A_Video013	680 × 680	124	124	9.0	anterior
12.	A_Video014	720 × 720	110	110	9.2	anterior
13.	B_Video016	380 × 380	100	100	8.7	posterior
14.	B_Video017	400 × 400	100	97	5.0	posterior
15.	B_Video018	400 × 400	100	100	11.4	anterior
16.	A_Video019	720 × 720	149	149	8.2	posterior
17.	B_Video022	400 × 400	100	100	15.2	posterior
18.	B_Video023	320 × 320	100	92	6.6	anterior
Total			2,060			

**Table A2. Summary of the test dataset. For each video, the image size, the number of annotated frames, and the mean occurrence of the placental vessel are presented. Key: FO - Frame Occurrence, VO - Vessel Occurrence. In particular, publicly available videos A.015, A.020, and A.025 were obtained from the first center, and videos B.010, B.012, and B.024 were obtained from the second center. Our private test videos are referred to as follows: C.001-C.004 – Center 3, D.003-D.029 – Center 4, E.034-E.036 – Center 5, and F.031-F.033 – Center 6.**

No.	Video name	Size (pixels)	No. of frames	FO (frame)	VO (%)	Type of placenta
1.	B_Video010	622 × 622	100	92	11.9	anterior
2.	B_Video012	320 × 320	100	100	5.4	anterior
3.	A_Video015	720 × 720	125	124	10.4	anterior
4.	A_Video020	720 × 720	123	100	13.7	posterior
5.	B_Video024	320 × 320	100	100	16.9	posterior
6.	A_Video025	720 × 720	110	110	9.4	posterior
7.	C_Video001	1024 × 1024	100	100	9.2	posterior
8.	C_Video003	1270 × 1080	100	100	9.5	anterior
9.	C_Video004	1024 × 1024	100	100	9.3	posterior
10.	D_Video006	1310 × 1080	50	50	10.5	anterior
11.	D_Video009	640 × 640	50	50	11.2	anterior
12.	D_Video012	720 × 720	50	50	12.1	posterior
13.	D_Video015	720 × 720	50	50	9.6	posterior
14.	D_Video019	1024 × 1024	50	50	9.3	posterior
15.	D_Video020	1024 × 1024	50	50	9.8	anterior
16.	D_Video021	1024 × 1024	50	50	10.1	posterior
17.	D_Video022	1430 × 1080	50	50	10.7	anterior
18.	D_Video029	930 × 920	50	50	12.2	posterior
19.	E_Video034	720 × 576	100	100	14.2	posterior
20.	E_Video035	720 × 576	140	140	15.2	posterior
21.	E_Video036	440 × 480	100	100	15.4	anterior
22.	F_Video031	384 × 288	200	200	11.0	posterior
23.	F_Video032	384 × 288	200	200	8.8	posterior
24.	F_Video033	384 × 288	200	200	7.9	anterior
Total			2,348			