

**Table E1: Patient Diagnoses, valve disease, interval from MRI to cath and Q<sub>p</sub>/Q<sub>s</sub> by 4D Flow MRI, invasive catheterization and SSFP MRI (RVSV/LVSV)**

Patient Number	Age/Sex	MRI to cath (days)	Diagnosis	Q <sub>p</sub> /Q <sub>s</sub> (cath)	Q <sub>p</sub> /Q <sub>s</sub> (4D Flow)	RV/LVSV (SSFP)	Valve regurgitation
1	59F	90	ASD	1.75	1.70	1.18	Mild TR
2	53F	38*	ASD	2.11	2.48	2.26	No
3	68M	1*	PAPVR	1.30	1.20	1.31	No
4	57M	41*	Pulm hypertension	1.00	1.00	0.86	No
5	31F	61	Tricuspid atresia s/p Fontan	0.60	1.00	—	No
6	50F	30*	Normal	0.83	0.91	1.36	Mod TR
7	78M	4	Hypertrophic CMP	1.00	1.00	1.07	Mild AR, PR
8	31M	86	Williams Syndrome	0.68	0.62	0.67	No
9	61F	36	Repaired cor fistula	1.09	0.93	0.85	No
10	55F	54	ASD	3.53	4.00	2.79	Mild MR
11	19M	15*	s/p heart transplant	0.83	0.76	0.82	No
12	71M	35	Heart failure	0.78	1.04	1.16	No
13	38F	82	Pulmonary atresia	1.10	1.00	1.02	Mild TR, PR
14	65F	89	PAPVR s/p repair	0.95	1.20	0.94	Mild MR, Mod TR
15	29F	23	Tetralogy of Fallot	1.00	1.05	1.07	No
16	50F	2	Tetralogy of Fallot	1.06	0.70	0.91	Mild TR, AR
17	38F	6*	New heart failure	0.98	0.93	0.88	Mild AR
18	47F	1*	ASD	1.10	0.92	1.95	Mild MR, TR, sev PR**
19	55M	33	PAPVR	1.58	1.60	1.48	No
20	46F	33	ASD	1.07	2.01	—	No
21	64F	40	PAPVR	2.13	2.02	2.07	Mild TR
22	17M	2*	PFO	1.13	0.93	1.05	No
23	84F	34*	ASD	1.00	1.07	—	Mild MR, TR
24	58F	67	Tricuspid regurgitation	1.19	0.92	2.20	Mild MR, Sev TR***
25	32F	89	Partial cor triatriatum	1.17	1.00	0.97	Mod TR
26	44M	2	VSD	1.75	1.73	1.17	Mild PR
27	34M	80*	PFO	0.97	1.00	—	No
28	43F	14*	ASD	3.86	3.95	3.20	Mod TR
29	55F	0	PAPVR and ASD	3.40	2.70	2.29	No
30	44F	90*	PAPVR	1.38	1.21	1.08	Mild TR, MR
31	33F	78	ASD	1.46	1.31	1.21	No
32	49F	35	ASD	1.20	1.50	1.46	No
33	57F	48	ASD	2.29	1.90	1.78	No

Note.—ASD = atrial septal defect, PAPVR = partial anomalous pulmonary venous return, PFO = patent foramen ovale, VSD = ventricular septal defect.

\* Denotes cath prior to MRI.

\*\* Regurgitant fraction 44%, regurgitant volume 56 mL.

\*\*\* Regurgitant fraction 73%, regurgitant volume 180 mL.