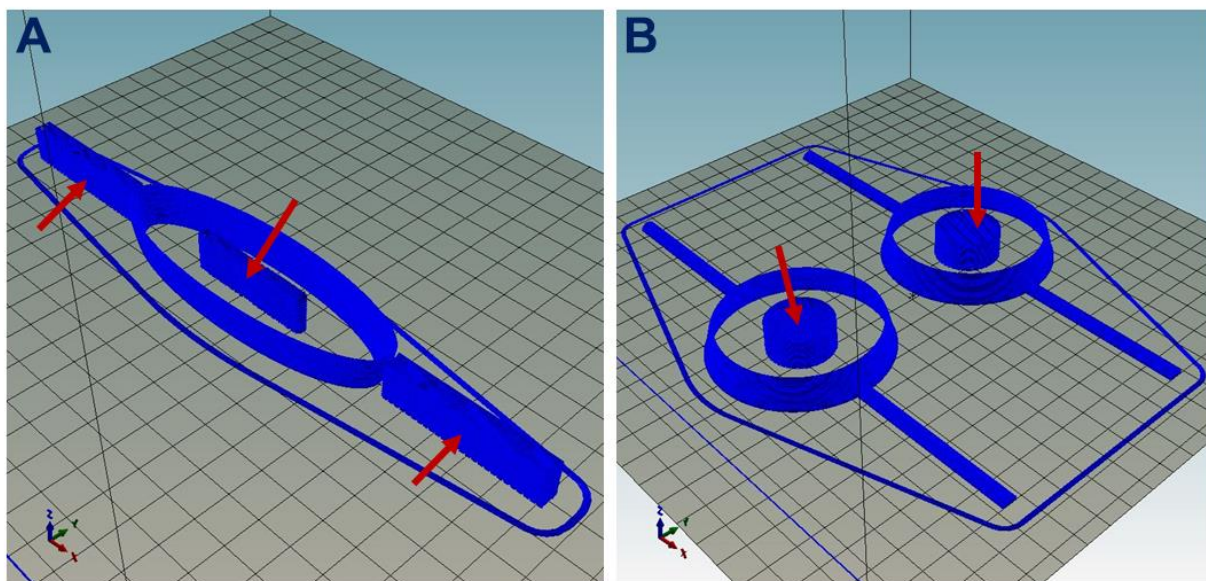


SUPPLEMENTAL FIGURE 1. CAD models of the spherical references with volumes corresponding to the kidney model: newborn (A), 1-year-old (B), 5-year-old (C), and adult (D).



SUPPLEMENTAL FIGURE 2. Slicing of the cortex of the adult kidney (A) as well as the spherical reference (B). The red arrows demonstrate the use of support material.

SUPPLEMENTAL TABLE 1. Theoretical and Actually Measured Filling Volumes of All Phantoms

		Newborn	1 Year	5 Years	Adult
Kidney	Theoretical filling volume (cm ³)	8.59	24.15	44.36	122.93
	Empty weight (g)	11.51	14.76	18.16	31.31
	Filled weight (g)	19.60	38.14	61.31	151.28
	Measured filling volume (cm ³)	8.09	23.38	43.15	119.97
	Error (%)	5.8	3.2	2.7	2.4
Sphere	Theoretical filling volume (cm ³)	8.58	24.23	44.30	122.99
	Empty weight (g)	11.38	14.40	17.26	26.42
	Filled weight (g)	19.86	38.37	61.16	149.97
	Measured filling volume (cm ³)	8.48	23.97	43.90	123.55
	Error (%)	1.2	1.2	0.90	0.46