

**Supplemental Table S1. Participant Demographics**

	<b>Benioff Children's Hospital (UCSF) n = 30</b>	<b>Boston Children's Hospital (BCH) n = 3</b>	<b>Children's Hospital Los Angeles (CHLA) n = 17</b>	<b>Lurie Children's Hospital (LCH) n = 13</b>	<b>TOTAL n = 63</b>	<b>p- value</b>
Age at Blocker Placement (years), mean (range)	11.6 (9.3 to 14.5)	11.4 (8.8 to 13.8)	11.7 (9.0 to 14.7)	11.4 (9.4 to 14.7)	<b>11.6 (8.8 to 14.7)</b>	0.9
Tanner Stage, mean (range)	2.4 (2 to 3)	2.7 (2 to 3)	2.3 (2 to 3)	2.4 (2 to 3)	<b>2.4 (2 to 3)</b>	0.7
Designated Sex at birth (% male)	60.0%	33.3%	47.1%	46.2%	<b>52.4%</b>	0.7
BMI Z- score, mean (95%CI)	0.34 (-0.09, 0.78)	-0.02 (-1.07, 1.04)	0.21 (-0.41, 0.83)	0.54 (0.05, 1.04)	<b>0.33 (0.04, 0.62)</b>	0.8
25-OH D (ng/mL), mean (95%CI)	30.8 (26.7, 34.9)	26.0 (14.0, 38.0)	28.1 (24.1, 32.1)	25.9 (20.5, 31.3)	<b>28.8 (26.2, 31.4)</b>	0.5
Ca Intake (mg/d), mean (95%CI)	629 (515, 743)	536 (370, 701)	622 (437, 807)	582 (344, 820)	<b>613 (525, 700)</b>	1.0
PAQ-C (1- 5 low- high), mean (95%CI)	2.5 (2.3, 2.8)	2.4 (2.3, 2.5)	3.0 (2.6, 3.3)	2.6 (2.3, 2.8)	<b>2.7 (2.5, 2.8)</b>	0.1

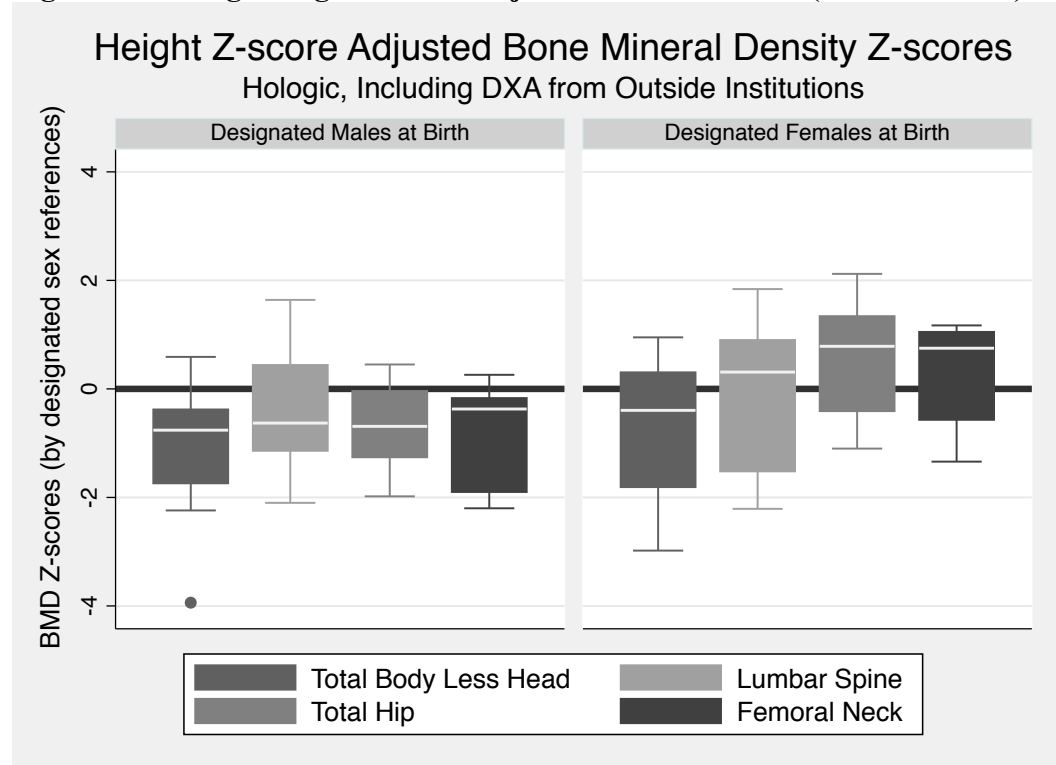
There were no statistically significant differences in key characteristics amongst the four sites.

**Supplemental Table S2. Selected Determinants of Bone Health, by Low\* vs. Normal BMD**  
(stratified by sex designated at birth)

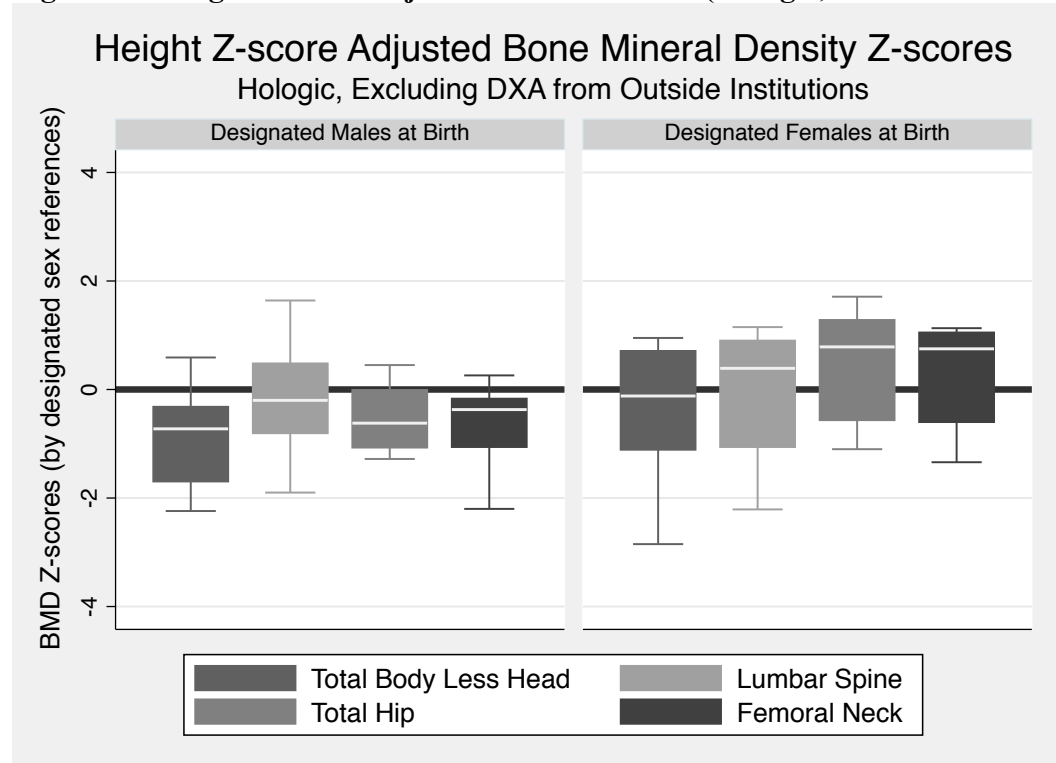
	<b>Low BMD Group (n = 14)</b>		<b>Normal BMD Group (n = 49)</b>	
	<b>DMAB (n = 10)</b>	<b>DFAB (n = 4)</b>	<b>DMAB (n = 23)</b>	<b>DFAB (n = 26)</b>
Age at Blocker Placement, years, mean $\pm$ SD	12.7 $\pm$ 1.0	10.4 $\pm$ 2.1	11.8 $\pm$ 1.4	11.1 $\pm$ 1.3
Tanner Stage, mean $\pm$ SD	2.3 $\pm$ 0.5	2.8 $\pm$ 0.5	2.3 $\pm$ 0.5	2.4 $\pm$ 0.5
PAQ-C Score, (1=low, 5=high), mean $\pm$ SD	2.2 $\pm$ 0.8	2.5 $\pm$ 0.6	2.6 $\pm$ 0.6	2.9 $\pm$ 0.6
Serum 25-hydroxyvitamin D, ng/mL, mean $\pm$ SD	27.5 $\pm$ 11.1	33.5 $\pm$ 10.6	26.6 $\pm$ 11.2	30.6 $\pm$ 7.2
Daily Calcium Intake, mg/day, mean $\pm$ SD	543.6 $\pm$ 420.2	442.9 $\pm$ 275.1	734.2 $\pm$ 375.7	551.6 $\pm$ 271.2
BMI Z-score, mean $\pm$ SD	0.09 $\pm$ 1.8	0.06 $\pm$ 1.0	0.5 $\pm$ 0.9	0.3 $\pm$ 1.1
Height Z-score, mean $\pm$ SD	-0.26 $\pm$ 0.82	-0.29 $\pm$ 1.58	0.5 $\pm$ 1.1	0.01 $\pm$ 1.1

\* at least one BMD Z-score  $< -2$

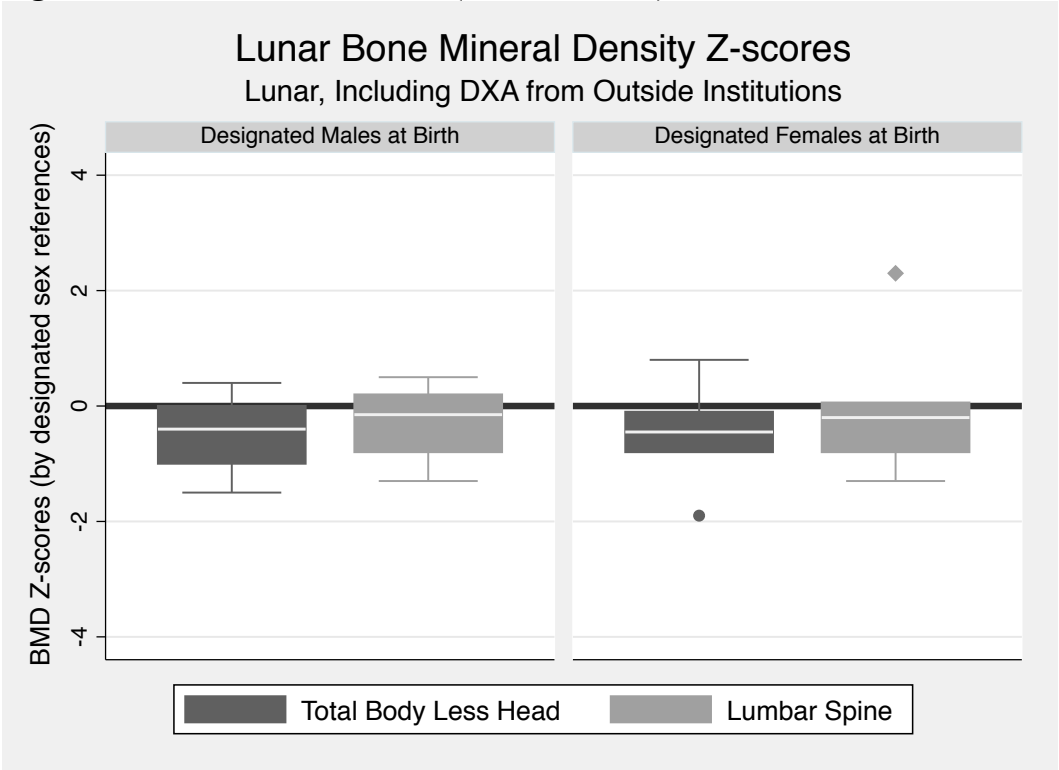
**Supplemental Figures. Bone Mineral Density Z-scores by DXA Manufacturer and Location**  
**Figure S1. Hologic height Z-score adjusted BMD Z-scores (all institutions)**



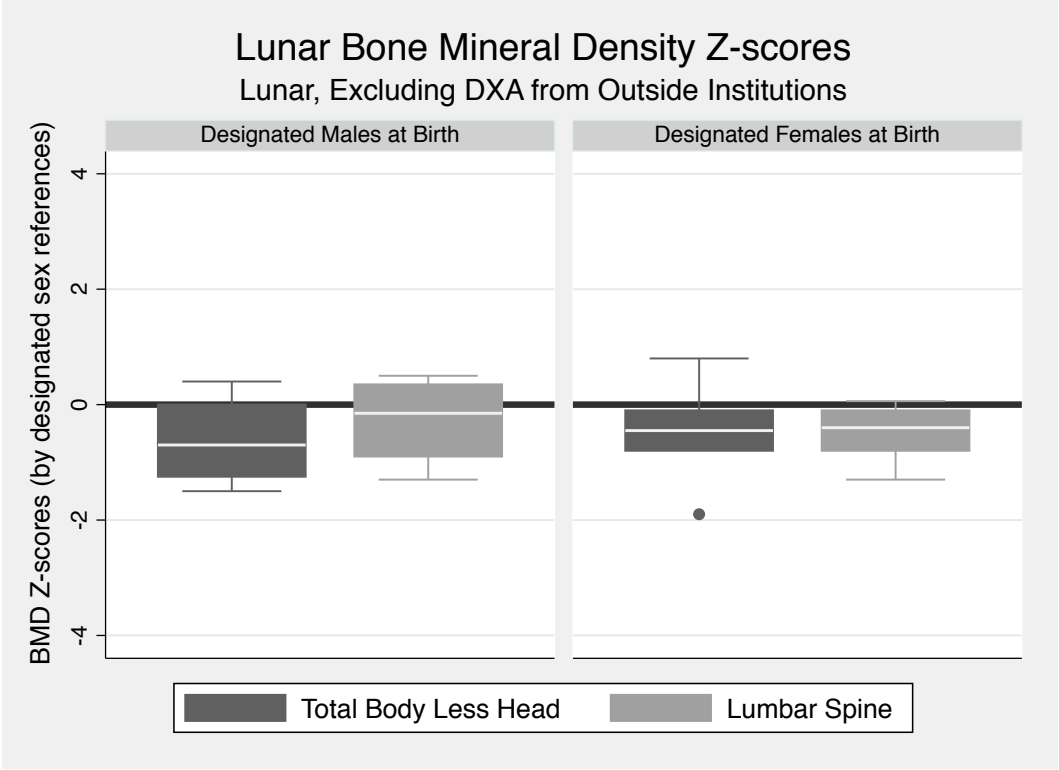
**Figure S2. Height Z-score adjusted BMD Z-scores (Hologic, from BCH and UCSF only)**



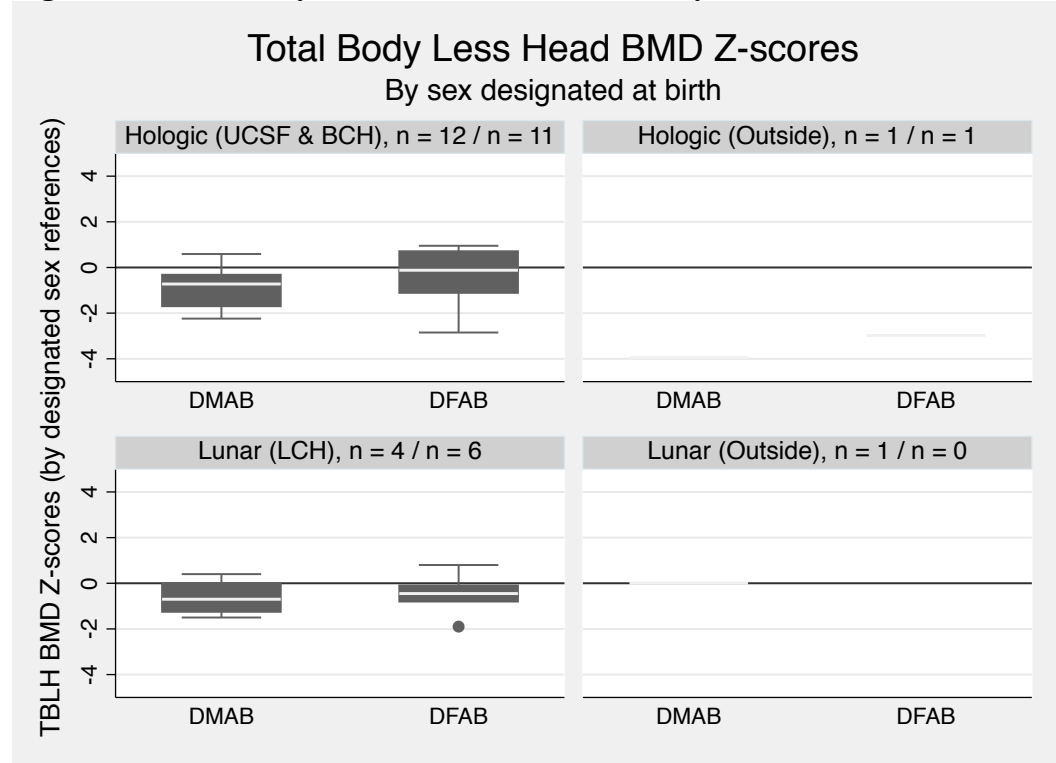
**Figure S3. Lunar BMD Z-scores (all institutions)**



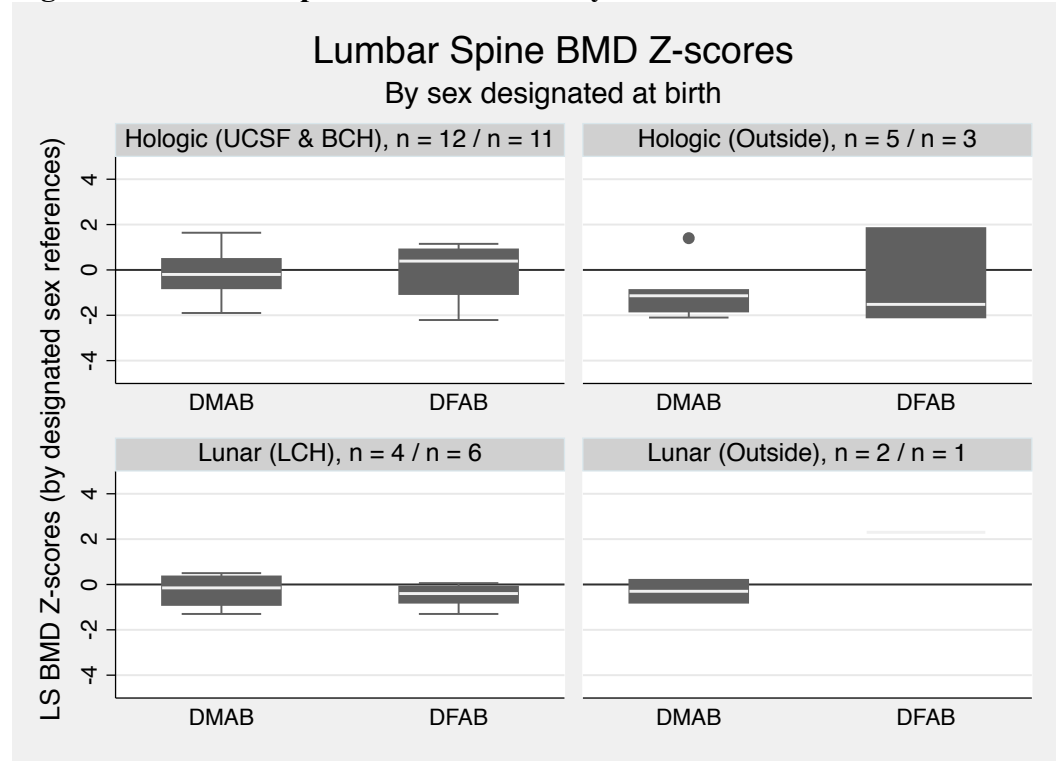
**Figure S4. Lunar BMD Z-scores (LCH only)**



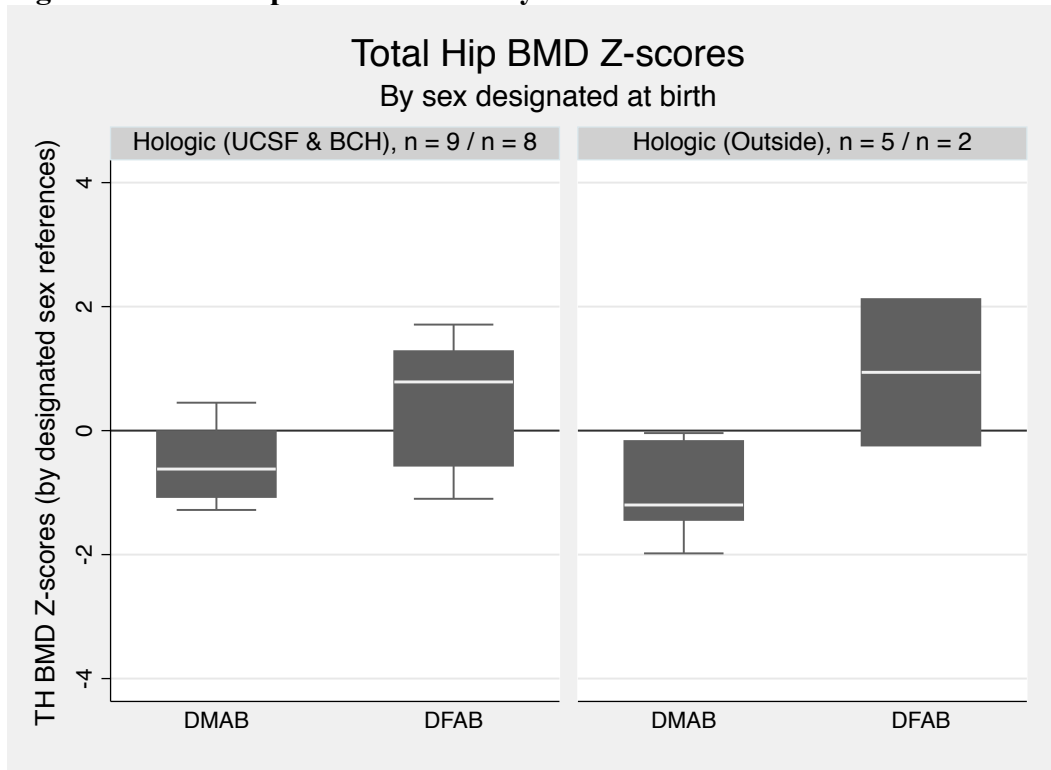
**Figure S5. Total Body Less Head BMD Z-scores by DXA Manufacturer and Location**



**Figure S6. Lumbar Spine BMD Z-scores by DXA Manufacturer and Location**



**Figure S7. Total Hip BMD Z-scores by DXA Manufacturer and Location**



**Figure S8. Femoral Neck BMD Z-scores by DXA Manufacturer and Location**

