Time-resolved values at multiple individual planes are demonstrated for in vitro measurements of (A) mean velocity at $R_{\text{peak-GRAPPA}} = 2$, (B) mean velocity at $R_{\text{peak-GRAPPA}} = 5$, (C) peak velocity at $R_{\text{peak-GRAPPA}} = 2$, and peak velocity at $R_{\text{peak-GRAPPA}} = 5$. Value of $z$ is indicated by line color. Vessels are: RICA – right internal carotid artery; RACA – right anterior cerebral artery; RMCA – right middle cerebral artery.
For in vitro data, noise ratio (mean static tissue velocity divided by venc) is shown at each value of Z (A). Mean values and linear relationship to z is tabulated in (B). The noise ratio for HV acquisitions is listed only for z = 0 (that is, when HV resolution is equal to that of LV as in typical dual venc), as the noise ratio of the HV acquisition decreases with increasing values of z.
For area (mm$^2$) at (A) $R_{\text{PEAK-GRAPPA}} = 5$, $z = 40\%$ (B) $R_{\text{PEAK-GRAPPA}} = 5$, $z = 80\%$, Bland-Altman plots for all cross-sectional plane locations in the entire anatomy, and in vivo FDNG showing the anatomical distribution of differences (Bland-Altman bias), relative to $R_{\text{PEAK-GRAPPA}} = 5$, $z = 0\%$. Bias and offset are indicated on the Bland-Altman plot where statistically significant. Vessels are labeled in (A).
For mean velocity (cm/s) at (A) z = 0% (B) z = 40% (C) z = 80%, and for peak velocity (cm/s) at (D) z = 0% (E) z = 40% (F) z = 80%, all with $R_{\text{peak-grappa}} = 5$, Bland-Altman plots for all cross-sectional plane locations in the entire anatomy for the second relative to first scan session. Bias and offset are indicated on the Bland-Altman plot where statistically significant.