

By first looking at the  $I_{\max}$  plots, we can see which observations are highly influential on the overall model fit and the corresponding parameter estimates. Comparing survival time rank to  $I_{\max}$  values show that there are three observations that look to be quite influential, with those belonging to patient ID's 7, 20, and 34. The next three plots comparing each covariate to  $I_{\max}$  values confirm that patients 20 and 34 look like outliers, while patient 7 doesn't appear to be much of an outlier.

The following delta-beta plots by index allow us to look at how each observation influences parameter estimates. For tumor size, the same patients of 7, 20, and 34 have the greatest influence, with patient 27 also potentially having some. For the gleason index, there are a handful of observations that are a bit away from 0, but patients 20 and 34 are particularly far away. Lastly for treatment, patients 20 and 34 are again the most influential with patients 7 and 27 looking to have some as well.

From all these plots, it appears that patients 20 and 34 are outliers in this dataset. When looking back at the full dataset at these two observations, we can compare these two observations to those with similar survival time. With this, it appears that patient 20 had a large tumor size related to those with similar survival time and patient 34 had small values for tumor size and gleason index, with a particularly small tumor size.