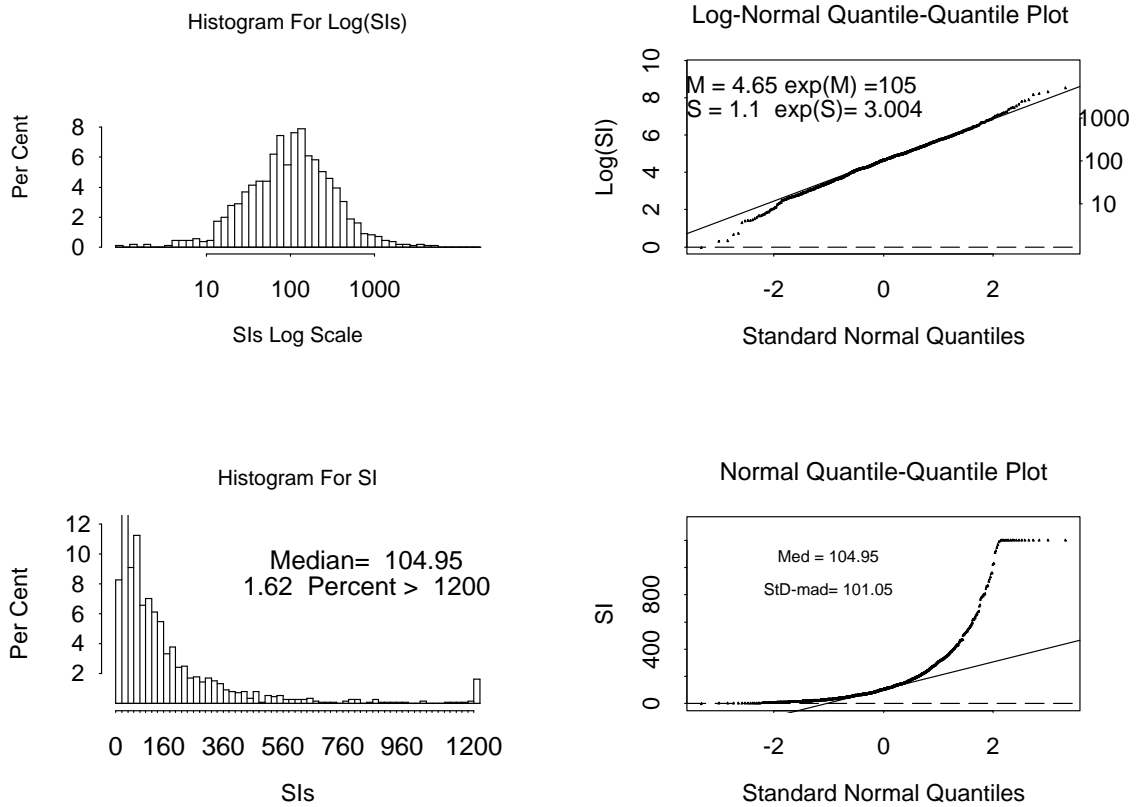


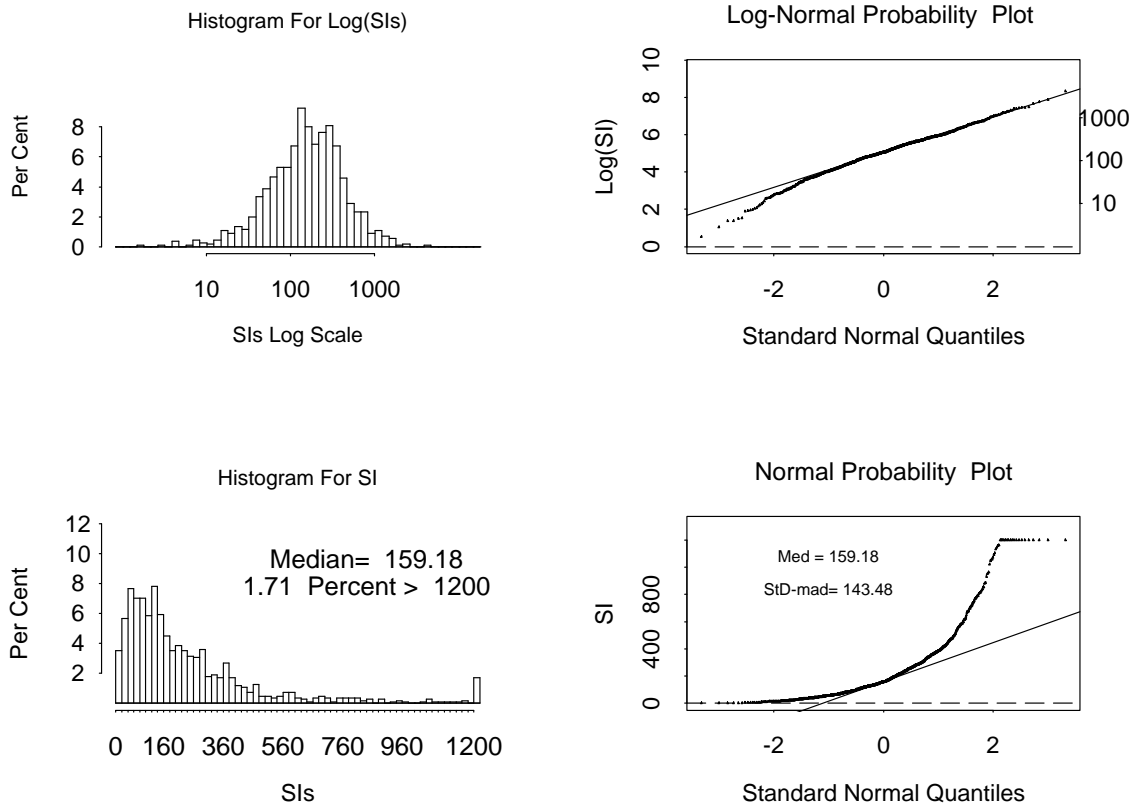
Y-12 Beryllium Workers Study (Serum 2): Results For PHA



NOTE: In Bottom Panels SIs Greater Than 1200 Replaced with 1200

**Fig. 1.** The panels on the left show the histograms of the SIs. The top left is for Ln(SI)s and the bottom left is for the SIs. The panels on the right are normal q-q plots. If the data in the histogram (on the left) is normally distributed then the normal q-q plot (on the right) should look like a straight line. These plots clearly show that Ln(SI)s follow the normal distribution, i.e. the SIs follow the lognormal distribution.

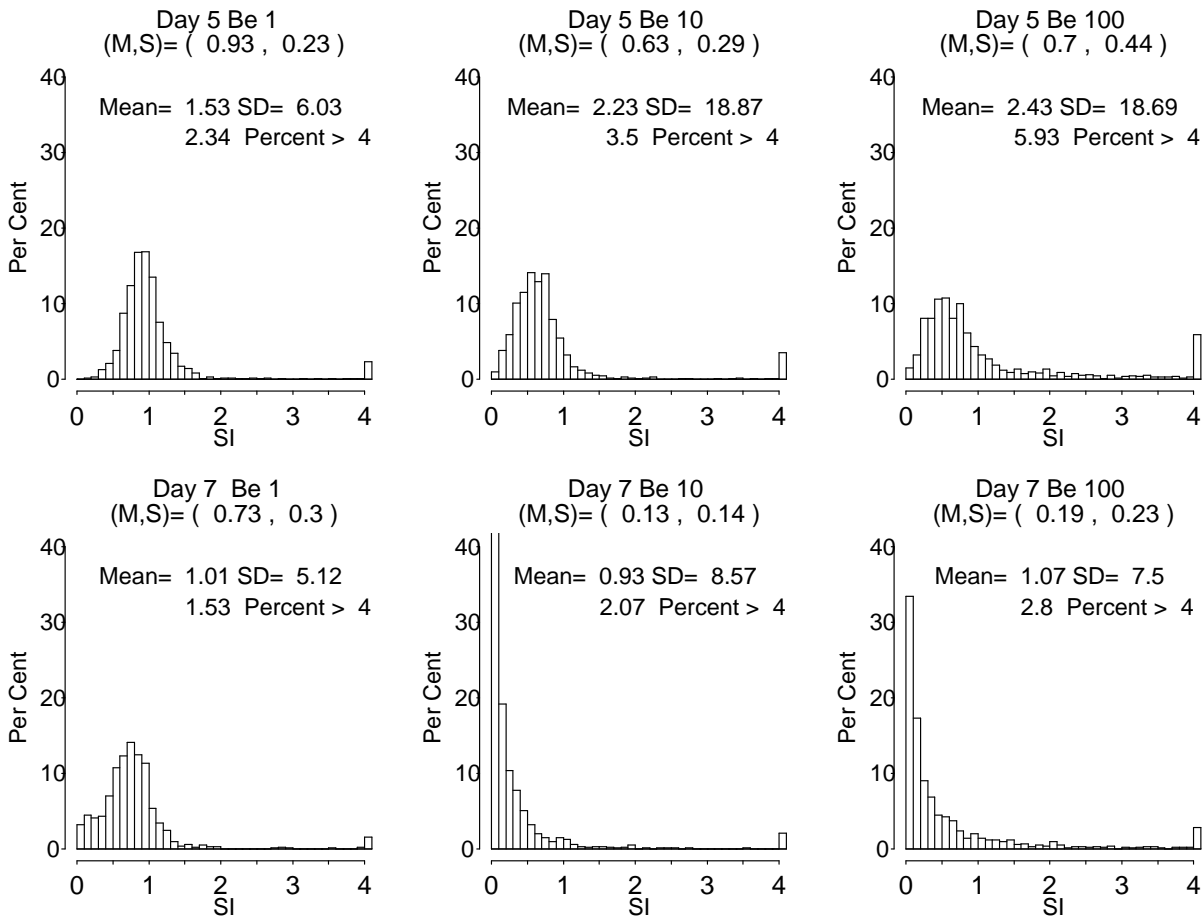
Y-12 Beryllium Workers Study (Serum 2): Results For CONA



NOTE: In Bottom Panels SIs Greater Than 1200 Replaced with 1200

**Fig. 2.** The panels on the left show the histograms of the SIs. The top left is for  $\text{Ln}(\text{SI})$ s and the bottom left is for the SIs. The panels on the right are normal q-q plots. If the data in the histogram (on the left) is normally distributed the the probability plot (on the right) should look like a straight line. These plots clearly show that  $\text{Ln}(\text{SI})$ s follow the normal distribution, i.e. the SIs follow the lognormal distribution.

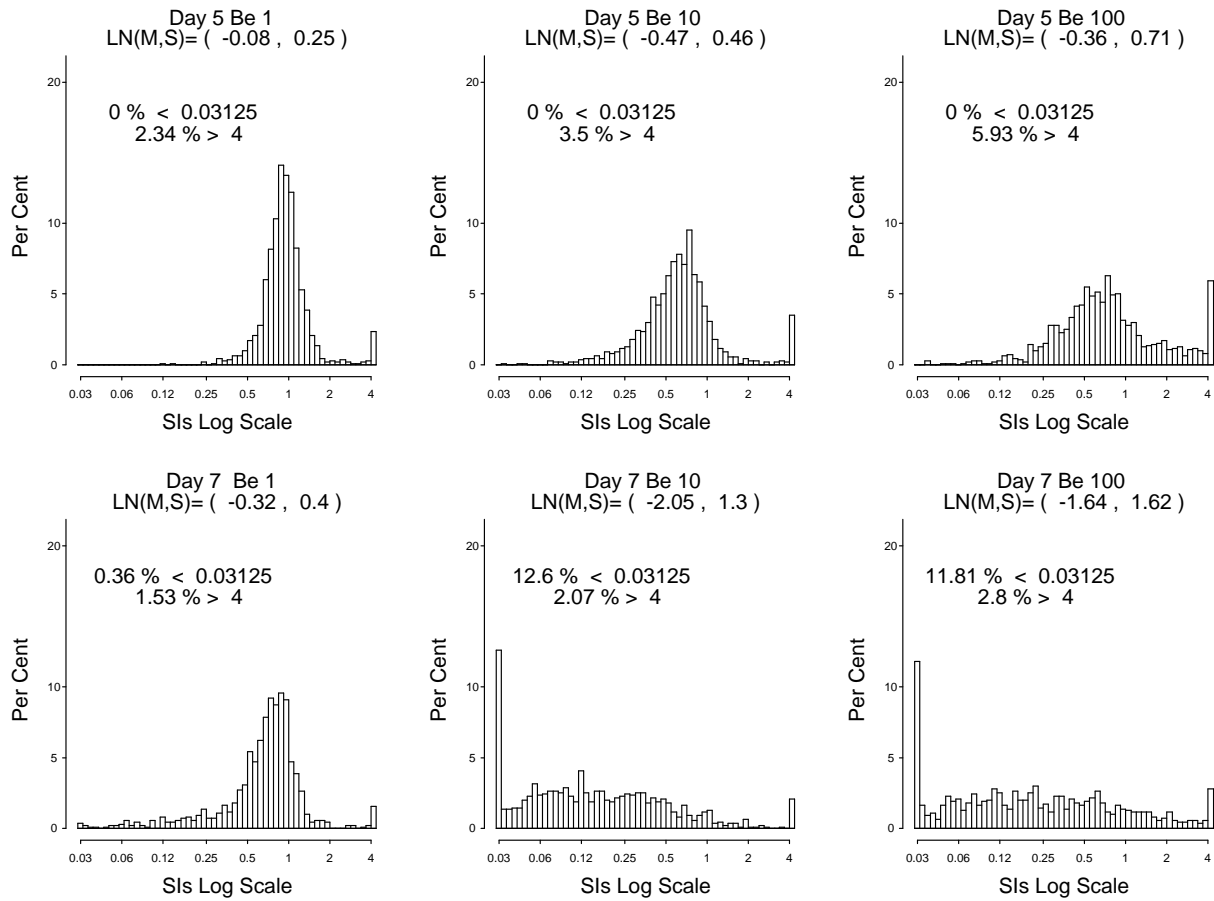
Y-12 Study: BeLPTs In Serum 2 For 1080 BWs and 33 NEs  
SIs Greater Than 4 Set Equal To 4



NOTE: M is Median SI and S is MAD estimate of Scale for SIs

**Fig. 3. Histograms of the SIs for the beryllium workers and nonexposed BeLPTs. Numbers in parenthesis are the outlier resistant median(M) estimate of location and S the MAD estimate of the scale parameter. The mean and standard deviation (SD) for each distribution are also given.**

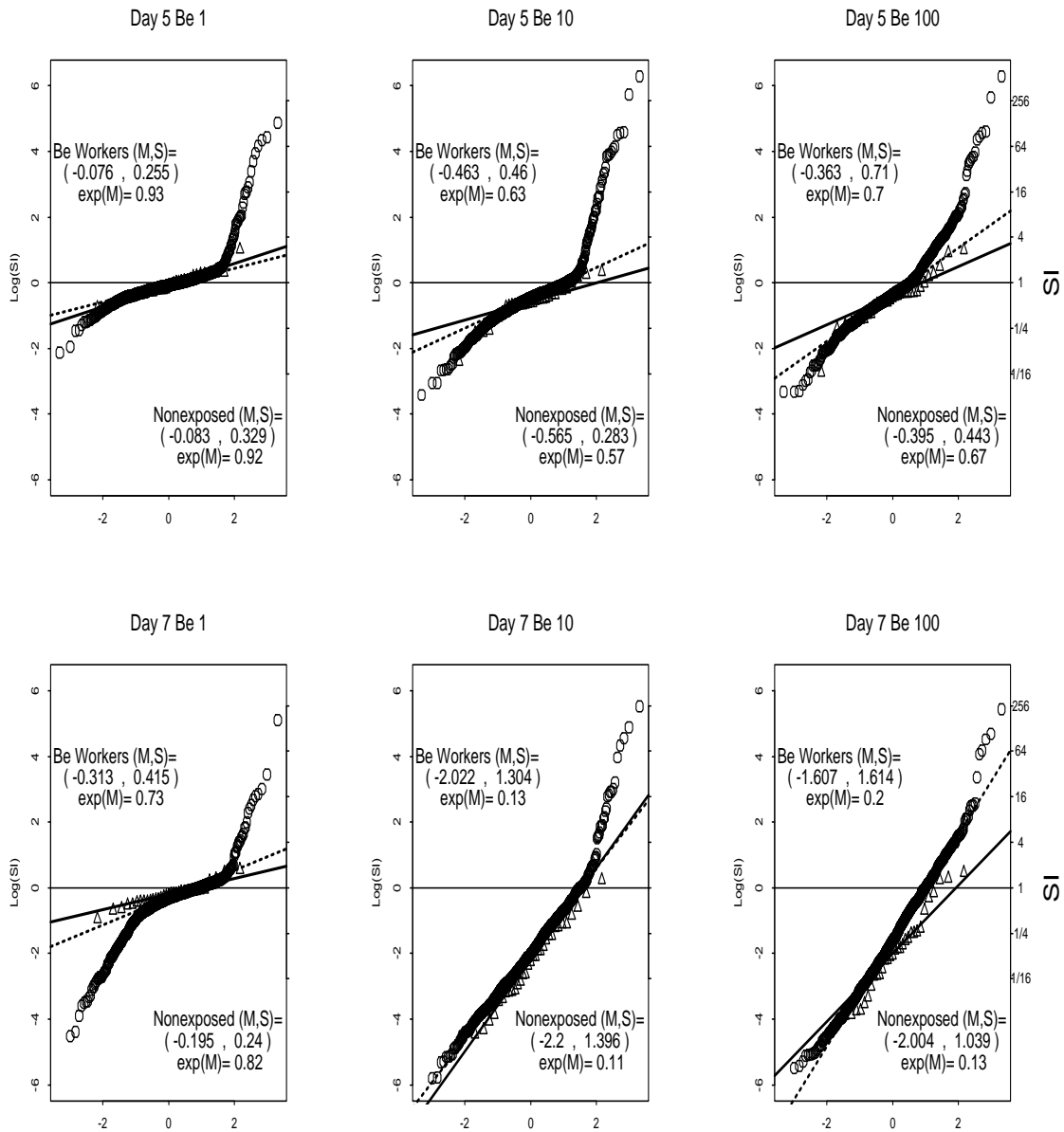
**BeLPTs For 1080 Beryllium Workers and 33 Nonexposed**  
 SIs Less Than 0.03125 Replaced with 0.03125 SIs Greater Than 4 Replaced with 4



NOTE: M is median Ln(SI) S is MAD estimate of Scale for Ln(SI)

**Fig. 4. Histograms of the Ln(SI)s for the beryllium workers and nonexposed BeLPTs. The outlier resistant estimates on the Ln scale of location M (the median) and S the MAD estimate of the scale parameter for each distribution are given in parenthesis.**

# Y-12 Be Study: Gaussian Probability Plots (Log SIs) For Nonexposed and Beryllium Workers

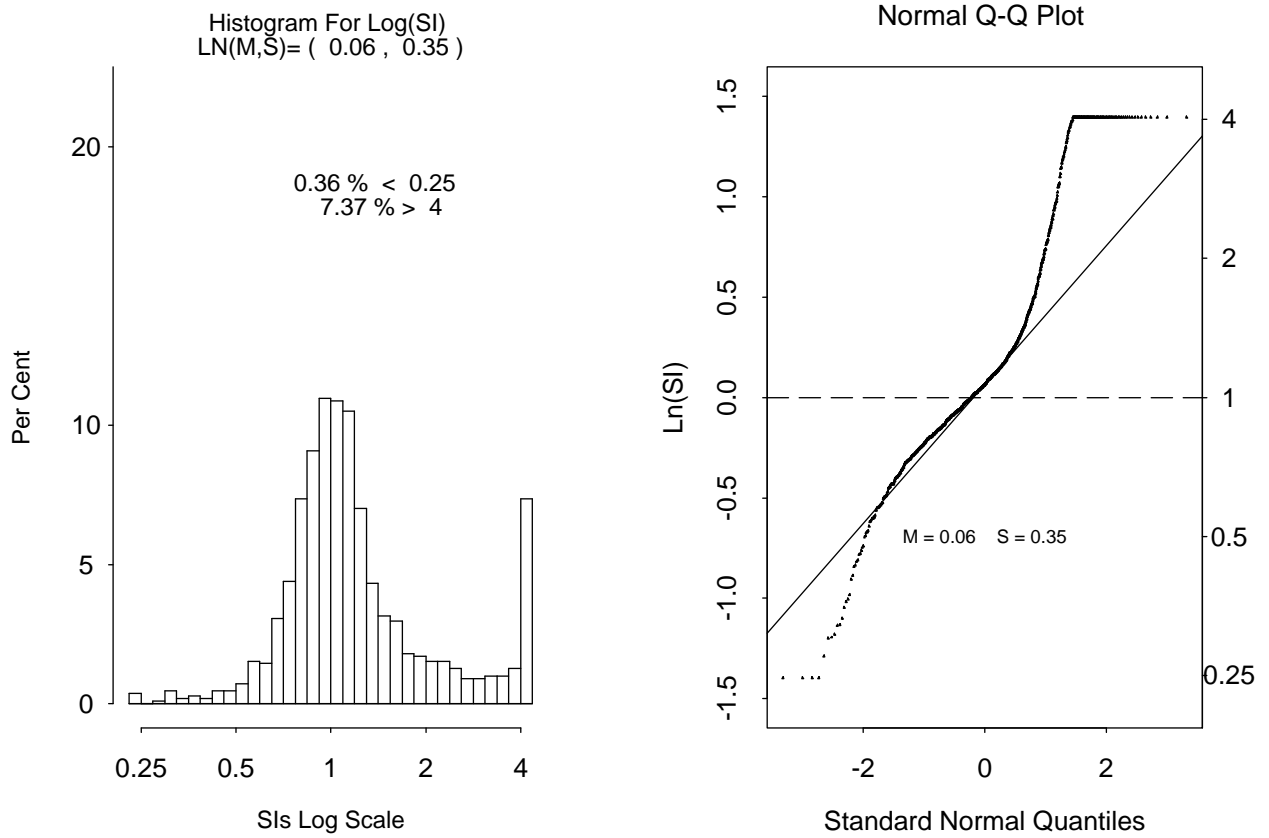


Note:  $M = \text{Median}[\text{Log}(SI)]$      $S = S\text{-Mad}[\text{Log}(SI)]$

**Fig. 5.** Normal q-q plots of  $\text{Ln}(si)$ s for each beryllium concentration on day 5 and day 7 for beryllium workers and nonexposed controls. The data values are shown on the vertical axis. The median (M), MAD scale estimate(S) of the  $\text{Ln}(si)$ s and  $\text{exp}(M)$  are listed on each plot. Values of M and S for beryllium workers (circles) are in upper left and nonexposed controls (triangles) are in lower right of each panel.

Y-12 Beryllium Workers Study: Results For MAXIMUM SI

NOTE: SIs Less Than 0.25 Replaced with 0.25 SIs Greater Than 4 Replaced with 4



**Fig. 6. Histogram and Normal Q-Q Plots for Ln(SI<sub>max</sub>) for beryllium workers and nonexposed combined. The Median (M), and MAD scale estimate(S) of the Ln(SI)s are shown.**

SI<sub>max</sub> for BeLPTs: Beryllium Workers (1080) Nonexposed(33)

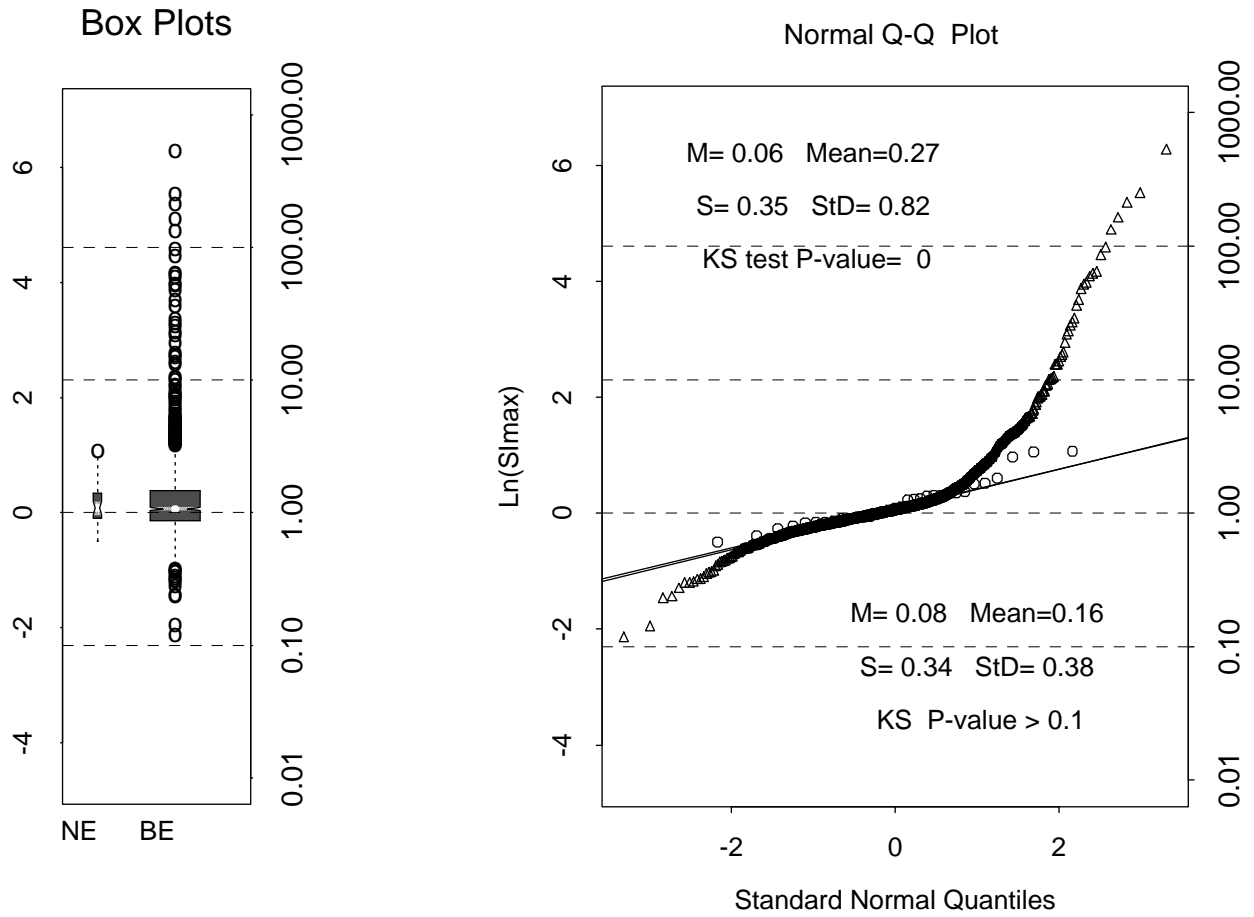
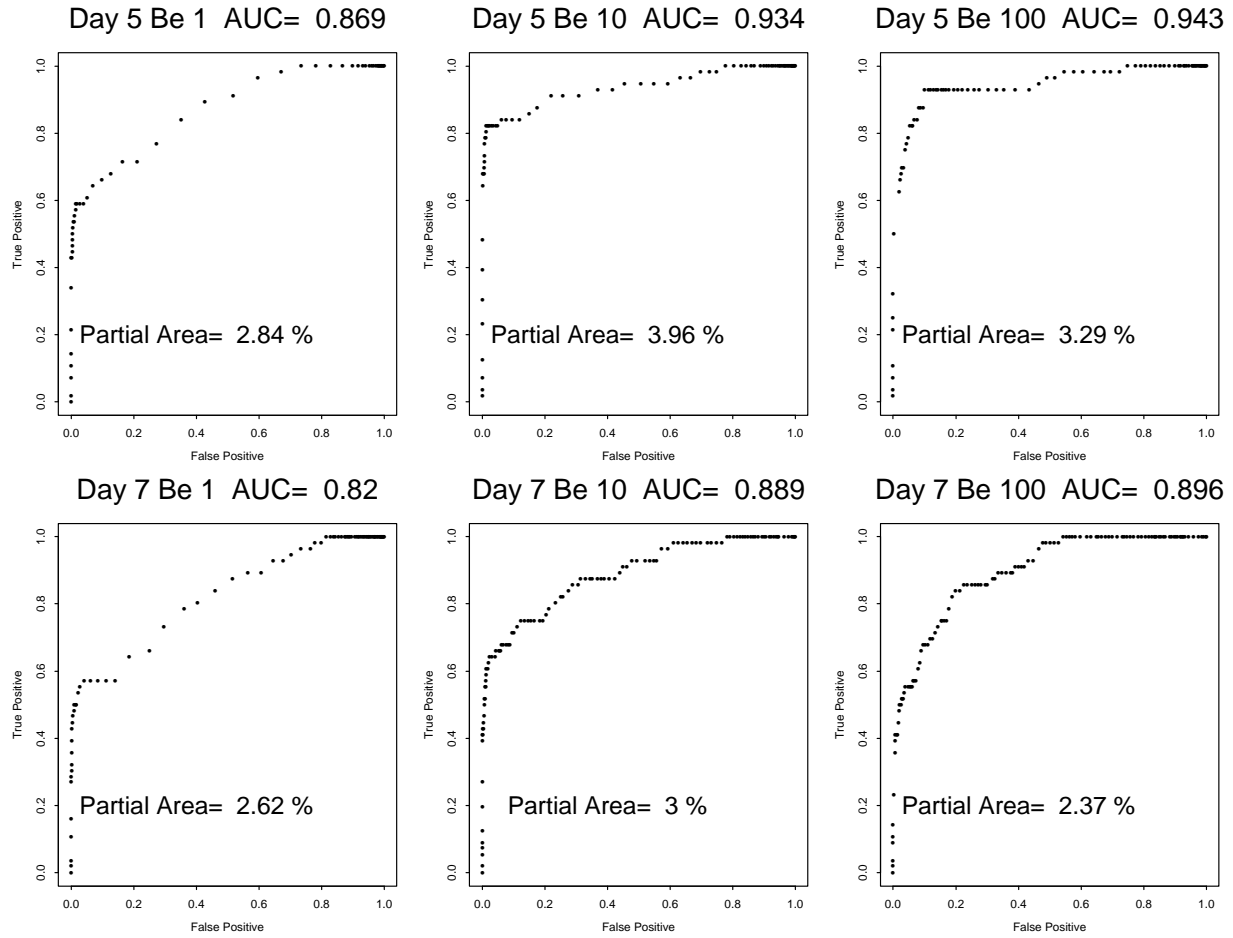


Fig. 7. Boxplots (left panel) and normal q-q plots (right panel) for  $\text{Ln}(\text{SI}_{\text{max}})$ . In the right panel summary statistics for nonexposed controls (circles) are shown in lower right, and for beryllium workers (triangles) in upper left of q-q plot. A small P value for Kolmogorov-Smirnov (KS) goodness-of-fit test indicates departure from normal distribution for  $\text{LN}(\text{SI}_{\text{max}})$ .

Y-12 Study: Empirical ROC Curves For Ln(SI)s



Note: AUC= Area Under ROC Curve Partial Area is Over(0, 0.05)  
roc5bt6.f

**Fig. 8. Empirical ROC curves for Ln(SI)s for Each Beryllium Concentration on Day 5 and Day 7. AUC is the area under the curve. The partial AUC shown in each plot is based on a nonparametric estimate of the area under the ROC curve from 0 to 0.05 on the x-axis (i.e., maximum FPR of practical interest is 0.05).**