The classification of disease state in prostate cancer using low energy x-ray interactions.

In the time available at this session on BM28 we planned to measure 90 prostate samples supplied to us by St. Bartholemews NHS trust. However we were plagued by instrumentation problems for the duration of the experiment. After the first two days one of the energy dispersive Si drift detectors we were using completely ceased to function and after many hours of testing had to be replaced. The replacement detector was nowhere near as efficient as the original and had different specs which meant all the data collected by this time had to be repeated but data collection time had to be increased. Later in the experiment the second Si detector started to show signs of unreliability and repeat measurements on a certified standard sample gave a varied xrf response. There were no other detectors available to test a replacement so we could not isolate the problem. However, the detector is now being looked at by the detector pool. Because of all of the problems encountered we did not manage to collect data for all samples. We also cannot rely on the accuracy of the data obtained from the Si detectors. The measurements will have to be repeated and we cannot send the samples back for histology until this is done as once they are sent back we will not be able to take further measurements. Furthermore it is extremely hard to obtain prostate samples for reasons stated in the application. I am therefore reluctant to rely on the data obtained in this round as we only have one chance at this. I would also propose that should we have another time slot for this experiment we bring our own detectors.