Introduction:
The link between hypoalbuminaemia and poor outcomes in critical care is well established [1]. Limited data are available on serum albumin trends during critical illness [2]. In this study we assessed trends in serum albumin for up to 7 days in both septic and non-septic critically ill patients.

Methods:
We retrospectively examined the records of 1107 adult patients admitted to critical care at the Royal Liverpool University Hospital between 2008 and 2014. We then excluded patients who did not have albumin data available for the first 7 days, leaving us with 758 patients. 506 patients (66.8%) had sepsis, and of these patients 116 had died by day 28. Of the 252 non-septic patients (33.2%), 40 patients had died by day 28. Albumin levels were collected for 7 days from admission to critical care, in addition to other demographic and biochemical data. Statistical analysis was performed using repeated measures analysis.

Results:
Septic patients had lower serum albumin than non-septic patients throughout the 7 day period (p<0.001). We observed a decrease in albumin by day 2 in all groups, with levels increasing over the subsequent days. There was no difference in daily serum albumin between non-septic patients who survived or died.

Conclusion:
This is the first study, to our knowledge, to compare albumin trends in septic and non-septic critically ill patients over 7 days. Further research is needed to elucidate the optimal recipients and timing of albumin therapy.

References: