

# What is the Cause of Death in Patients Managed in the Community with Acute Kidney Injury?

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## INTRODUCTION

Acute Kidney Injury (AKI) in the community has become a public health priority. It is recognised that a large amount of AKI occurs in the community, thus a need for measures for early identification, prevention and management in primary care<sup>1</sup>. Consequently, in April 2016 routine reporting of AKI with a serum creatinine result was rolled out to Primary Care by NHS England with the aim of alerting GPs to assist the delivery of optimum case<sup>2</sup>. We have previously described the mortality rate and demonstrated that there is an associated mortality with AKI managed entirely in the community<sup>3</sup>.

## AIM

To establish the cause of death in patients who are managed in the community with AKI and whether the death can be attributed to AKI.

## METHOD

The data was taken from the regional data base, collected over a 6-month period. All patients aged >18 who had had a serum creatinine requested by a GP in our region over February to August 2009. We identified those who had died within 30 days of serum creatinine being reported by the laboratory. We then ascertained the cause and place of death using records from the Office for National Statistics by matching NHS number and date of death. Primary cause of death and underlying secondary cause of death were then categorised using ICD 10 codes.

Figure 1 Unadjusted Kaplan-Meier survival plot

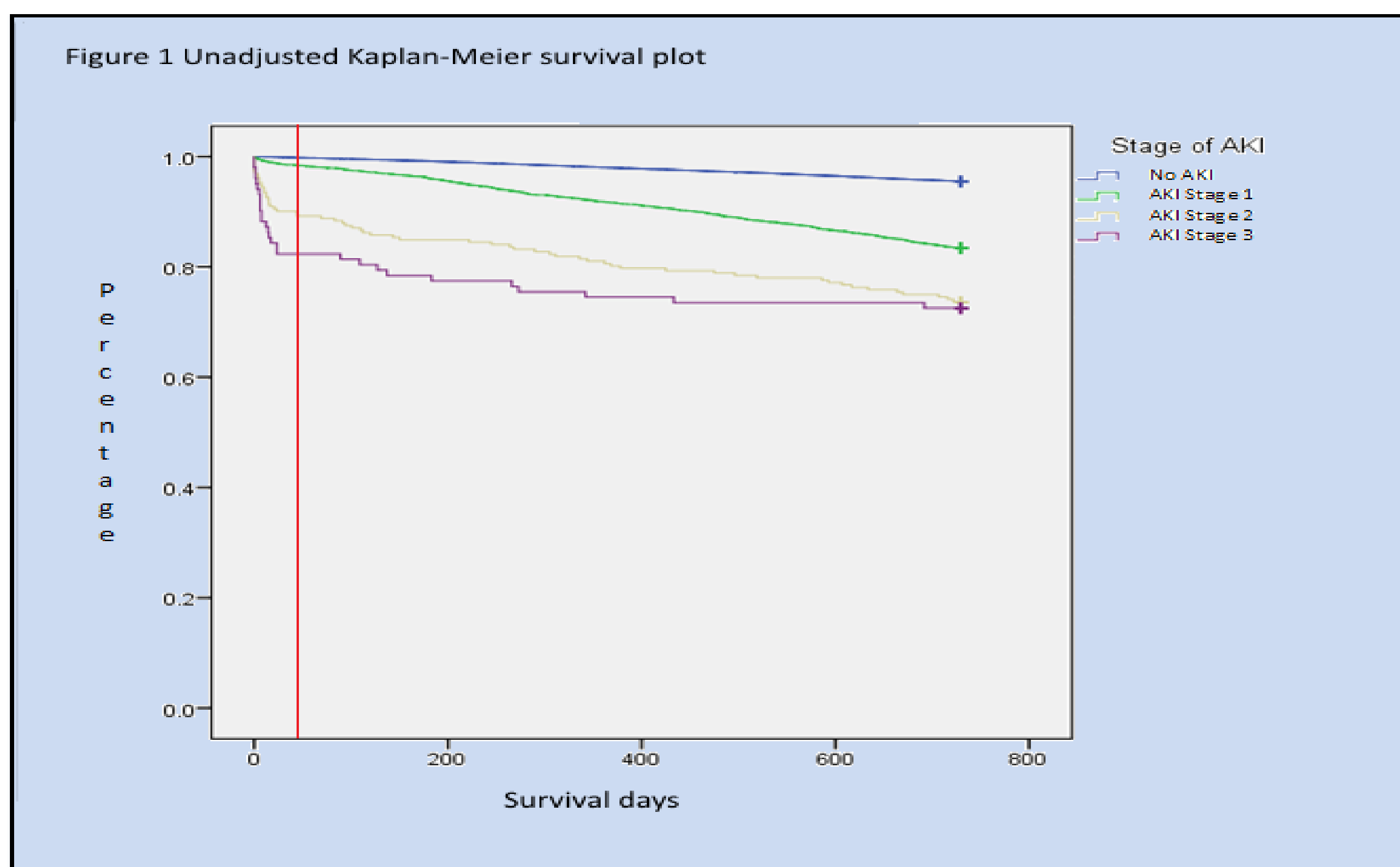


Table 1 Number of deaths at 30 days by AKI

Stage AKI	number of deaths	% deaths in 30 days
0	71	0.13
1	52	1.4
2	23	9.9
3	18	17.6
<b>Total</b>	<b>165</b>	<b>0.3</b>

Figure 2 Assessing cause of death at 30 days

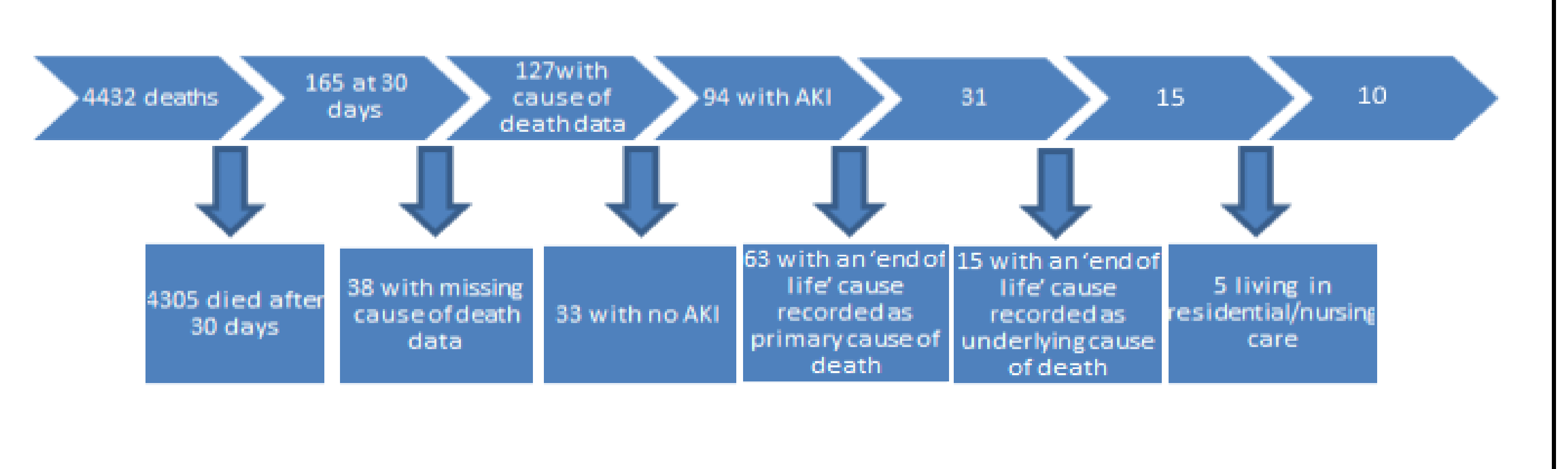
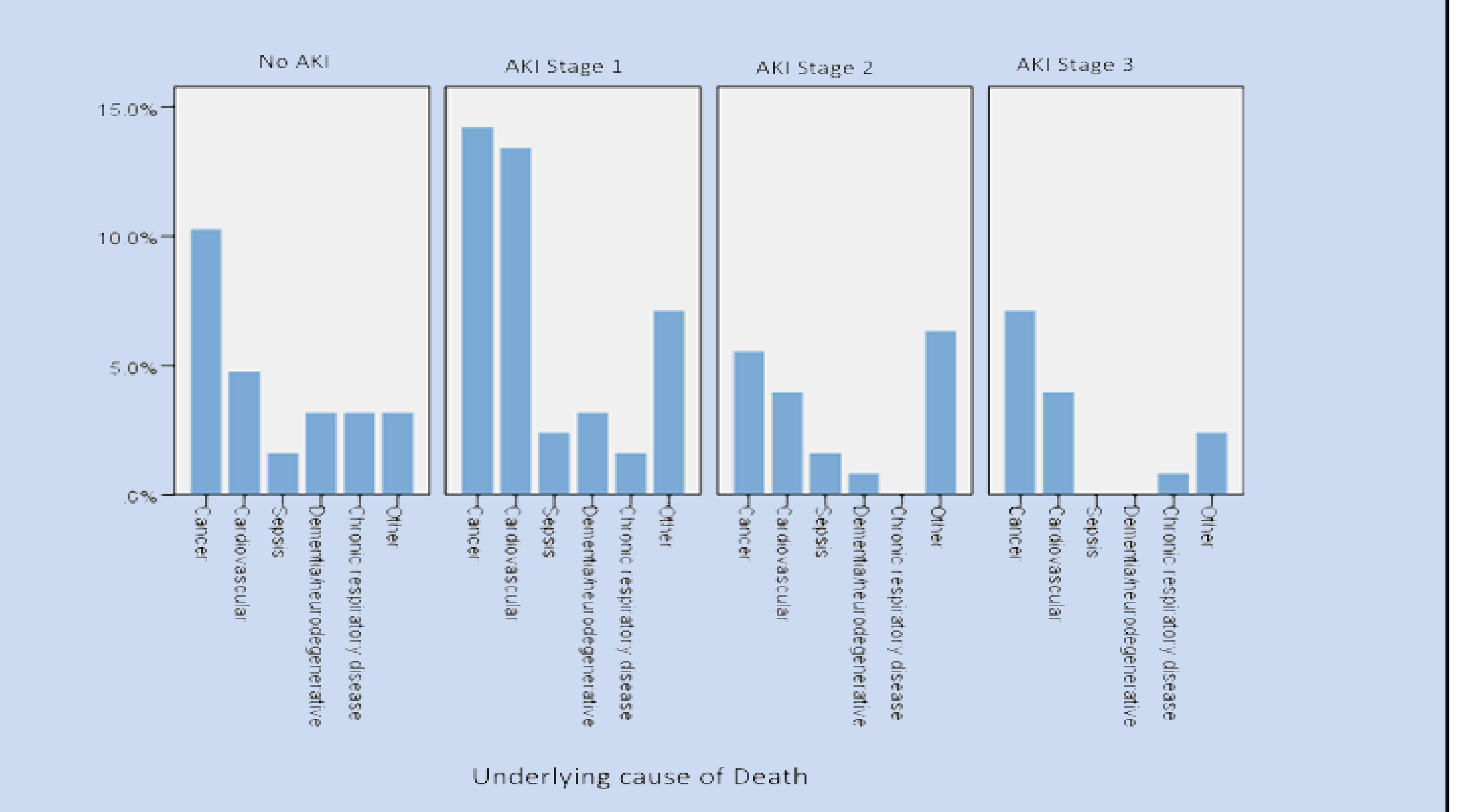


Figure 3 Cause of death by stage AKI



## RESULTS

4432 deaths occurred during the study period, 165 occurred within 30 days of the serum creatinine result. 93 patients were categorised with AKI. The average age was; No AKI: 79, AKI Stage 1: 82, Stage 2: 78 and Stage 3: 78. 52% were male. Cause of death by stage of AKI is shown in Figure 1. All patients coded as having sepsis as an underlying cause of death had bronchopneumonia as a primary cause of death, many had other significant co-morbidity, their average age was 90 years. None of the patients had AKI recorded as the primary or underlying cause of death. 78 of the patients were on an end of life pathways based on either cause or place of death. Of the 15 remaining patients, 5 died in nursing/residential care with a mean age 88, range 11. The remaining died in hospital, 5 were a complication of elective admissions, 5 died in Accident & Emergency prior to being admitted acutely.

## CONCLUSION

The results demonstrate 30 day mortality rate increases with worsening AKI stage and that 87% of patients who died with AKI in the community were suffering with chronic illness and had a cause or place of death, indicating they were on an end of life pathway. The remaining 13% died of an acute event not related to AKI. This suggests that the decisions to manage some people who had AKI in the community are appropriate in our region.

## REFERENCES

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