SECTION K MORTALITY

The cause, location and circumstances of the death of patients treated by RRT in Scotland who have died since 01 January 2008 are collected as part of the Scottish Mortality Audit of Renal Replacement Therapy (SMARRT).

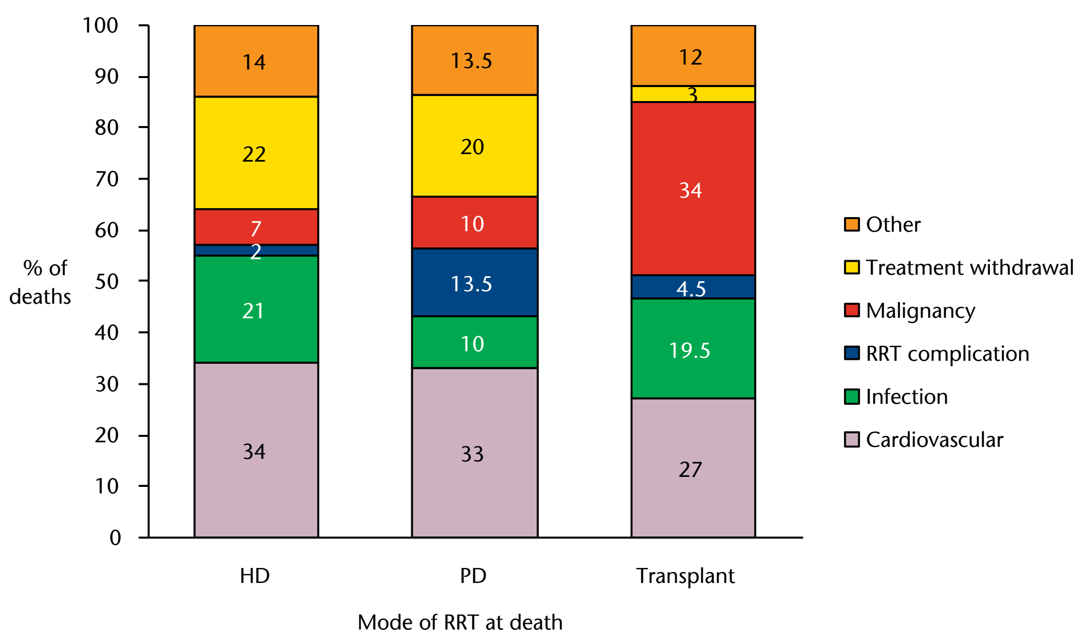
Cause of death has been coded in accordance with ERA-EDTA codes and then aggregated into six groups: cardiovascular, infection, RRT complication, treatment withdrawal, malignancy and other causes of death.

A complete list of the ERA-EDTA cause of death codes, SMARRT groupings and the SMARRT data collection form are available on the SRR website:

http://www.srr.scot.nhs.uk/Projects/Projects2.html#mortality

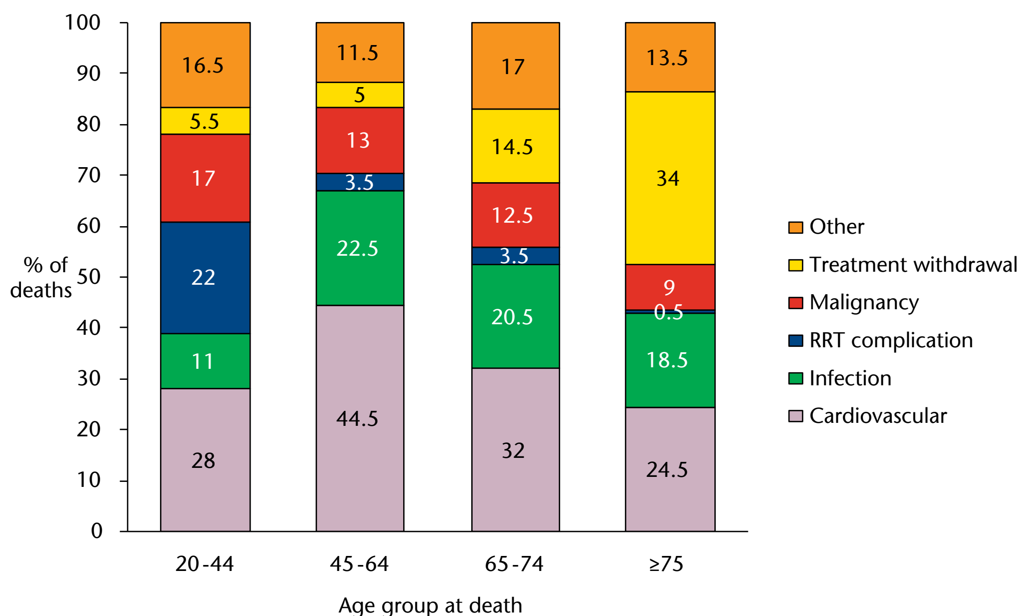
Between 01 January 2013 and 31 December 2013 there were 444 deaths among RRT recipients. This represents 9.7% of the prevalent RRT population. Cause of death data are available for 414 (93.2%) and information on the location of death for 412 (92.7%).

K1 Cause of death and modality of RRT at death 2013



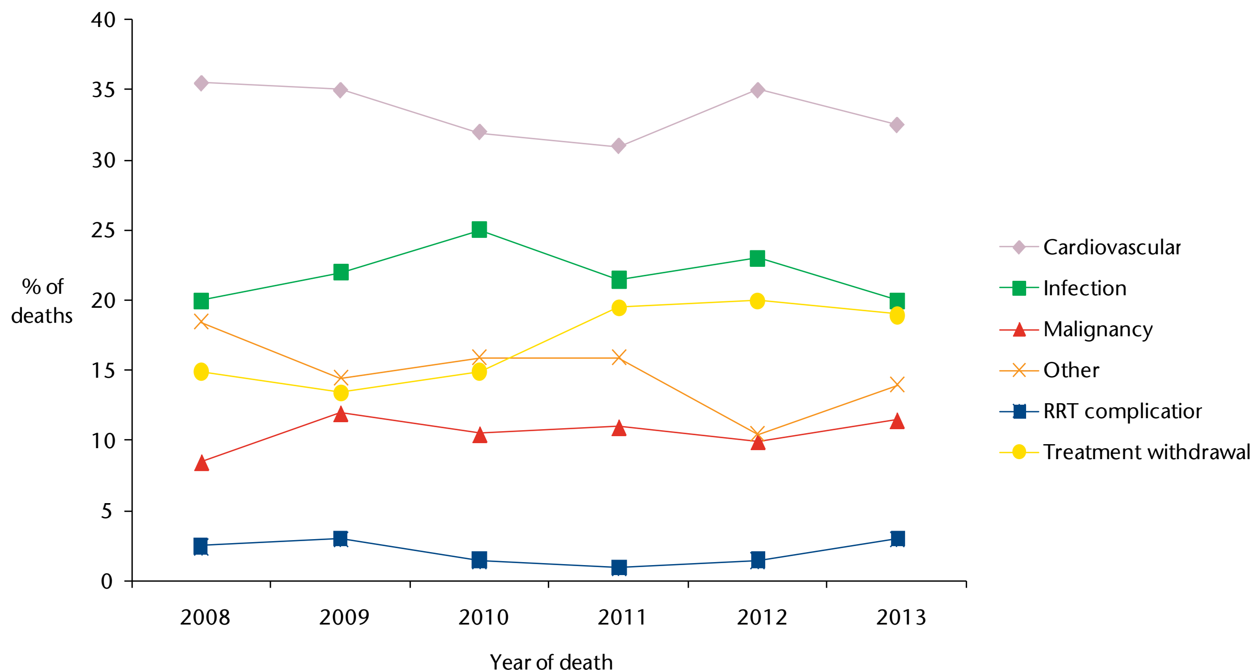
The mode of RRT at the time of death was HD for 317 patients who died in 2013, PD for 30 patients and a kidney transplant for 67 patients. Cause of death missing for 30 patients.

K2 Cause of death and age at death 2013



18 patients aged 20-45 died in 2013, 121 aged 45-65, 112 aged 65-75 and 163 aged ≥75 years. Cause of death missing for 30 patients.

K3 Cause of death by year, all modes of RRT



K4 Location of patient death 2013		
Location	**Number of patients**	**Percentage of patients**
Usual place of residence	89	20
Hospital	293	66
Hospice	11	2.5
Community Hospital	14	3.1
Other place of death	3	0.7
Place of death unknown	2	0.5
Data missing	32	7.2
Total	**444**	**100**

After the death of each patient receiving RRT in Scotland, their clinician is asked to consider the circumstances leading to death and to record any areas of concern in that patient's management according to a five category scale:

1. There were no areas of concern or for consideration in the management of this patient.
2. There were areas for consideration but they made no difference to the eventual outcome.
3. There were areas of concern but they made no difference to the eventual outcome.
4. There were areas of concern which may have contributed to the patient's death.
5. There were areas of concern which caused the death of this patient who would have been expected to survive.

Where the management of the patient was categorised as 4 or 5 further details of the circumstances of death were obtained.

In 2013 there were five category 5 and six category 4 deaths. These 11 deaths represented 2.5% of all deaths occurring in this 12 month period and were reported by 4 centres. The remaining 5 adult centres reported no category 4 or 5 deaths in 2013. Between 2008 and 2012 3.5% of deaths fell into categories 4 and 5 with cases being reported by 8 of the 9 adult renal units in Scotland.

The cases highlighted as categories 4 or 5 were:

- 5 relate to systems failures

  Including delays in treatment or transfer from centres without a renal unit
- 2 intervention related

  Deaths related to surgical complications
- 1 hyperkalaemia
- 2 infection
- 1 other