Chapter 14: Survival of Incident Patients

Summary

- From the first RRT, the one year survival of all patients (unadjusted for age) is 78%. From the 90th day of RRT, the one year survival is 87%. The age adjusted (60 years) survival for the 1 year after 90 day period is 86%.

- There is a high death rate in the first 90 days of RRT, a period not included in reports by many registries and other studies.

- The 5 year survival (including deaths within the first 90 days) is 45%: 63% for patients aged less than 65 years and 24% for those aged 65 years and over.

- Several centres had a figure for the 1 year after 90 day survival which was outside 2 or 3 SDs from the mean for E&W: in some cases this was better survival, in others poor survival. Poor reporting by renal units of patient co-morbidity and ethnicity makes interpretation of these apparent differences in patient survival between centres difficult, and a relationship to clinical performance cannot yet be inferred.

- To adjust survival for case-mix requires improved data return by renal units: methodologies and structure at renal unit level need to improve, possibly with investment in informatics staff.

- The hazard of death does not increase with length of time on dialysis (in the first 6 years). The 'vintage effect' of increasing hazard of death with length of time on RRT noted in the US, is not apparent in UK survival data.

Introduction

The analyses presented in this chapter examine the survival from the start of renal replacement therapy (RRT), including pre-emptive transplantation, of incident RRT patients. Patients returning to dialysis after a failed transplant are not included in this incident cohort. For individual renal units such analysis allows a comparison with experience in previous years and with other centres.

These analyses encompass the outcomes from the total incident UK dialysis population, including the 31% who start on peritoneal dialysis and the 3% who receive a pre-emptive transplant. The results therefore show a true reflection of the whole UK RRT population. The survivals reported here are better than those reported for the UK by the IDOPPS study, which only includes haemodialysis patients. As shown in Chapter 4, the haemodialysis patients are a selected group with increased co-morbidity and higher death rates than those selected for PD or pre-emptive transplant.

The one and two year survival figures quoted in this chapter are from the first day of renal replacement therapy unless stated otherwise, not from day 90 as quoted in the USRDS data from the USA and by many countries included in the IDOPPS study.

Death rates in different centres contributing to the UK Renal Registry are reported here. These are raw data that require interpretation if legitimate centre comparisons are to be attempted. The Registry can adjust for the effects of the different age distributions of the patients in different centres, but lacks sufficient data from many participating centres to enable adjustment for factors of co-morbidity and ethnic origin, which have been demonstrated to have a major impact on outcome. With this lack of information on case mix, no significance can currently be attributed to any apparent difference in survival between centres. It is for this reason that in this section the individual units are not identified. It is most important that participating centres send more comprehensive data on co-morbidity and ethnic origin.

Despite the uncertainty about any apparent differences in outcome, for centres which appear to be outliers, the Registry initiates discussions to see whether any factors can be identified which contribute to apparently ''good'' or ''poor'' results.

Statistical methods

The 'number of days at risk' was calculated for each patient, the sum of these values for all patients divided by 365 representing the 'number of patient years at risk'. The mortality rate was defined as:

$$\frac{\text{Number of deaths on dialysis}}{\text{Number of patient years at risk}}$$

The unadjusted survival probabilities (with 95% confidence intervals) were calculated using the Kaplan-Meier method, in which the probability of surviving more than a given time can be estimated for members of a cohort of patients, without accounting for the characteristics of the members of that cohort. Where centres are small, or the survival probabilities are greater than 90%, the confidence intervals are only approximate.

In order to estimate the difference in survival of different subgroups of patients within the cohort, a stratified proportional hazards model (Cox) was used where appropriate. The results from the Cox model are interpreted using a hazard ratio. When comparing two groups, the hazard ratio is the ratio of the estimated hazards for group A relative to group B, where the hazard is the risk of dying at time t given that the individual has survived until this time. The underlying assumption of a proportional hazards model is that this ratio remains constant throughout the period under consideration. Whenever used, the proportional hazards model was tested for validity.

Funnel plot

To enable assessment of whether an observed survival is likely to be significantly different from the national average, Figure 14.7 has been included in the report. From this, for any size of incident cohort (X axis) one can identify whether any given survival rate (Y axis) falls within plus or minus 2 standard deviations (SDs) from the national mean (solid lines, 95% confidence interval) or 3 standard deviations (dotted lines, 99.8% confidence interval). Thus for an incident cohort of 100 patients the observed survival would have to be outside the limits of 79% to 93% at 2 SDs. However for an incident cohort of 500 patients these limits are from 83% to 89% at 2 SDs.

Validity of the centre adjustment for proportional hazards

For the Cox model to be used to adjust centre survival to a specific age (eg 60 years), the assumption of constant proportionality means that the relationship of survival (hazard of death) to age is similar in all centres within the time period studied. If one centre had a relationship of survival with age different from the other centres, the adjustment would not be valid. Testing showed the relationship to be similar for all centres.

Survival of new patients on RRT

The revised Renal Standards document concluded that:

> ***It is hard to set survival standards at present because these should be age, gender and co-morbidity adjusted and this is not yet possible from Registry data. The last Standards document recommended at least 90% one year survival for patients aged 18–55 years with standard primary renal disease. This may have been too low as the rate in participating centres in the Registry was 97%, though numbers were small***

The Renal standard Document defines Standard Primary Renal Disease using the EDTA diagnosis codes (including only codes 0–49): this excludes patients with renal disease due to diabetes and other systemic diseases. It is more widespread practice to simply exclude diabetics, so these figures are included in this report to allow comparison with reports from other Registries. The results are shown in Table 14.1.

The UK data show the high death rate in the first 90 days and a steep age related decline in survival over all time periods. Table 14.2 contains 90 day and 1 year after 90-day adjusted

Table 14.1: One-year patient survival – patients aged 18–55, 2002 cohort

First treatment	Standard primary renal disease	All diseases except diabetes
All %	95.4	93.9
95% CI	93.7–97.1	92.2–95.5
HD %	93.4	91.6
95% CI	90.7–96.0	89.2–94.0
PD %	98.6	97.9
95% CI	71.1–100	96.3–99.6

patient survival for England and for Wales, showing the high initial death rate.

The age adjusted survival by first established treatment modality is shown in Table 14.3.

There appears to be better survival on PD compared with HD (Tables 14.1 and 14.3) after age adjustment, similar to data from the USRDS and Australasian (ANZDATA) Registries. However a straightforward comparison of the modalities in this way is not valid, as there are significant factors in selection for the modalities and the patients in the two groups are not comparable (Chapter 4).

Tables 14.4 to 14.10 show survival of all patients and those above and below 65 years of age, for up to six years after initiation of renal replacement therapy.

If the survival data in Tables 14.5 to 14.10 were calculated from after day 90 (1 year after day 90 survival, 2 years after 90 day survival, etc) this increases the survival in all cases by an additional 3%–4% across both age bands. For example in Table 14.9 the 5 year survival for patients aged <65 years becomes 65.2% (was 62.6%) and for those aged 65+ years becomes 27.9% (was 24.4%).

Table 14.3: One-year survival by first established treatment modality (age adjusted)

	HD	PD
Adjusted 1 year after 90 days %	83.8	89.6
95% CI	82.0-85.5	87.6–91.7

Table 14.4: Unadjusted 90 day survival of new patients, 2002 cohort by age

Age	KM[1] survival analysis (%)	KM 95% CI	N
18–64	**95.2**	94.1–96.2	1,663
⩾65	**85.8**	84.2–87.4	1,806
All ages	**90.3**	89.3–91.3	3,469

[1]KM = Kaplan-Meier.

Table 14.5: Unadjusted 1 year survival of new patients, 2002 cohort by age

Age	KM survival analysis (%)	KM 95% CI	N
18–64	**88.9**	87.4–90.4	1,663
⩾65	**67.0**	64.9–69.2	1,806
All ages	**77.6**	76.3–79.0	3,469

Table 14.2: Patient survival across England and Wales, 2002 cohort

	England	Wales	England & Wales
Adjusted (age 60) %	93.0	92.4	93.0
90 day, 95%CI	92.0–94.1	89.9–95.0	92.0–94.0
Adjusted (age 60) %	85.7	85.5	85.7
1 year after 90 days, 95%CI	84.2–87.2	81.8–89.4	84.3–87.1

Table 14.6: Unadjusted 2 year survival of new patients, 2001 cohort by age

	KM survival analysis (%)			
Age	1 year	2 year	2 year 95% CI	N
18–64	88.5	**81.3**	79.3–83.3	1,524
⩾65	66.8	**53.2**	50.6–55.7	1,540
All ages	78.4	**67.4**	65.7–69.1	3,064

Table 14.7: Unadjusted 3 year survival of new patients, 2000 cohort by age

	KM survival analysis (%)				
Age	1 year	2 year	3 year	3 year 95% CI	N
18–64	89.6	82.3	**75.4**	73.0–77.9	1,211
⩾65	68.1	54.8	**41.4**	38.3–44.0	1,156
All ages	79.1	68.7	**58.5**	56.5–60.5	2,367

Table 14.8: Unadjusted 4 year survival of new patients, 1999 cohort by age

	KM survival analysis (%)					
Age	1 year	2 year	3 year	4 year	4 year 95% CI	N
18–64	88.1	82.3	75.6	**69.6**	66.8–72.5	1,028
⩾65	67.8	52.6	39.9	**29.7**	26.7–32.7	910
All ages	78.5	68.2	58.7	**50.7**	48.4–53.0	1,938

Table 14.9: Unadjusted 5 year survival of new patients, 1998 cohort by age

	KM survival analysis (%)						
Age	1 year	2 year	3 year	4 year	5 year	5 year 95% CI	N
18–64	87.1	80.8	74.5	69.2	**62.5**	59.3–65.6	872
⩾65	65.1	50.7	30.7	31.8	**24.4**	21.3–27.4	767
All ages	76.9	66.9	58.9	51.2	**44.8**	42.5–47.2	1,639

Table 14.10: Unadjusted 6 year survival of new patients, 1997 cohort by age

	KM survival analysis (%)							
Age	1 year	2 year	3 year	4 year	5 year	6 year	6 year 95% CI	N
18–64	87.4	80.4	74.4	68.3	64.0	**59.7**	55.1–64.2	454
⩾65	65.8	45.2	33.6	23.9	14.5	**10.8**	7.5–14.1	345
All ages	78.1	65.2	56.8	49.1	42.6	**38.6**	35.2–42.0	799

Survival of new patients and age

The incident cohort included in this analysis is all those patients starting RRT in 2002. Patients who recovered function within 90 days (ie patients with acute rather than chronic renal failure) have been excluded.

In Figure 14.1, the unadjusted survival has been shown for the first 90 days, the first year from day 0 of RRT and the first year after day 90. The last figure allows comparison with many other Registries, including the US Registry, which record data only from day 90 onwards.

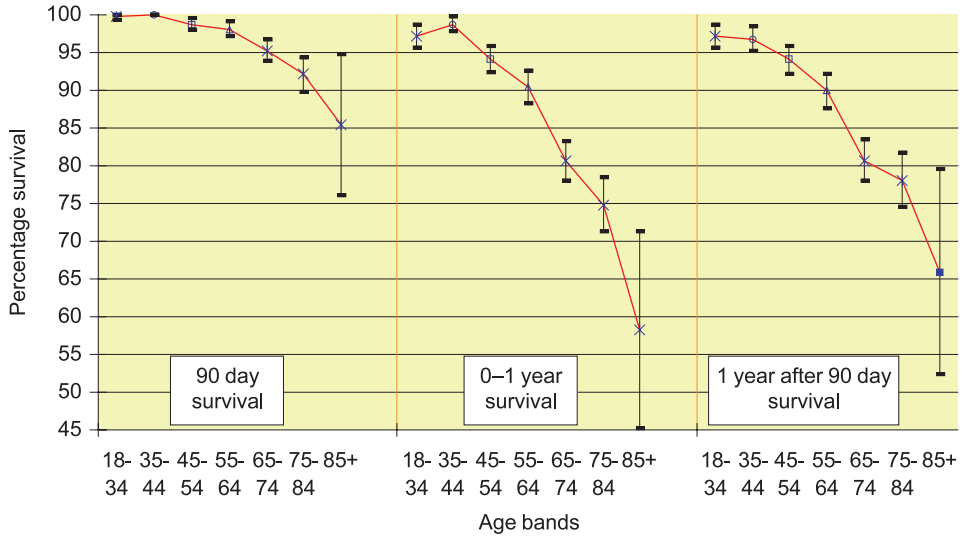

Figure 14.1: Unadjusted survival of all incident patients, by age band

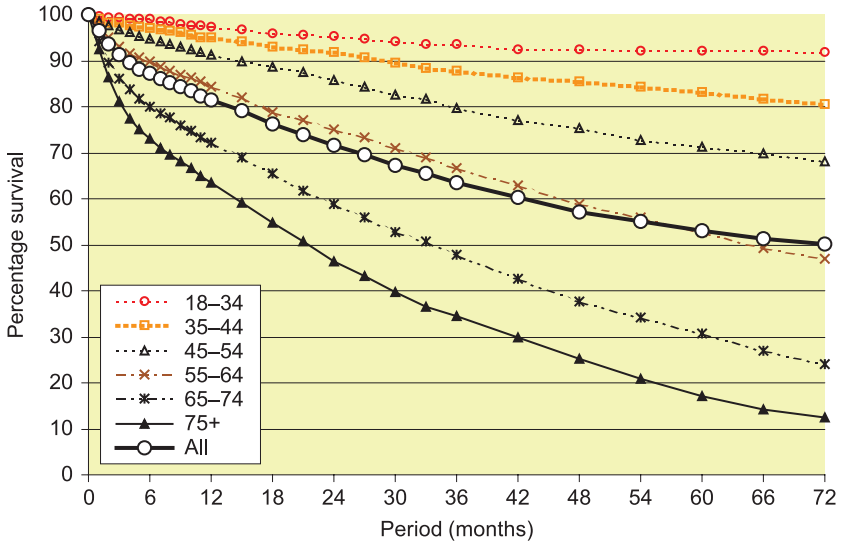

Figure 14.2: Kaplan-Meier 6-year survival of incident patients

The UK Registry has been collecting data on incident patients since its inception in 1997, enabling survival to be estimated for up to six years after starting renal replacement therapy. The Kaplan-Meier survival curves are shown in Figure 14.2.

Only the older groups reach 50% mortality in the 6 year period. For these the 50% survival times with 95% CI are: aged 55–64, 66 months ±2.8 m; aged 65–74, 33 months ±1.8 m; over 75, 21 months ±2.1 m. Patients with diabetes have been included in these survival figures. These data include the first 90-day period and so patients may appear to show a lower survival than data from other international Registries which exclude this period.

The hazard ratios confirm data previously shown by the Registry that the greatest hazard of death occurs in the first 120 days; thereafter the hazard ratio remains stable (Figure 14.3). The hazard ratios for the differing age bands are not proportional across the ages for all the time periods. These data contrast with the 'vintage effect' seen in data from the USRDS Registry (USA) which demonstrates a rising hazard of death with increasing length of time on renal replacement therapy. Cross sectional analysis of the one year hazard of death in

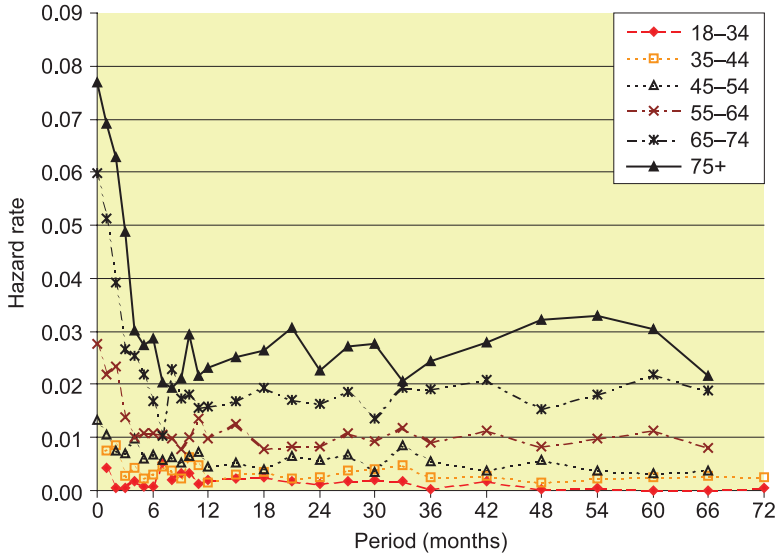

Figure 14.3: 6-year hazard of death ratios, by age band

The results beyond 36 months for patients aged 75+ are not reliable as the numbers were very small

prevalent UK patients also fails to show any effect of 'vintage'.

Age adjustment of survival in the first 90 days and thereafter

Analysing all the patients starting RRT between 1997 and 2000, the proportional hazards for each 1-year increase in age of the patients for the two time intervals of the first 90 days and the subsequent 365 days are shown in Table 14.11.

These data show that there was, in the first 90 days, a greater risk of death for every 1 year increase in patient age than there was in the subsequent 1-year period. For every 10 year increase in patient age, there was an increase in the hazard of death of 58% (95% CI 50–65%) in the first 90 days, compared with 41% (95% CI 35–47%) in the subsequent 365 days.

These data on their own would not invalidate the proportional hazards model for age adjustment between centres for the single time period of 0-365 days. Analysis has shown that there are centre variations in the hazards that invalidate the model for the 0-365 day time period but the model is valid if the period is divided into 0-90 days and any subsequent period. This is due to the change over period between these two hazards varying between centres, with some earlier at 80 days and others later at 110 days. When analysed within the periods the hazards remain proportional but when analysed for the 0-365 days they are not. Analysed over longer periods (eg 3 years) the effect is lost as it becomes very small.

Table 14.11: Increase in proportional hazard of death for each year increase in age, at 90 days and for 1 year thereafter

Interval	Hazard of death	95% CI
First 90 days	1.058	1.050–1.065
1 year after first 90 days	1.041	1.035–1.047

Changes in incident patient survival, 1997–2002

In Figure 14.4, the right-hand graph shows the adjusted one-year after 90-day survival for all incident patients on the Registry in the years 1997–2002. More centres have joined the Registry since 1997 and these centres may have had varying survival rates. The left-hand graph shows the same analysis just for those centres that reported in 1997. It shows that in the years up to 2001 there appeared to be an overall improvement in survival from 84.0 to 88.0%, but the trend has since stopped or even reversed. These data also demonstrate that the survival profile of the 1997 centres is similar to that of the newer centres.

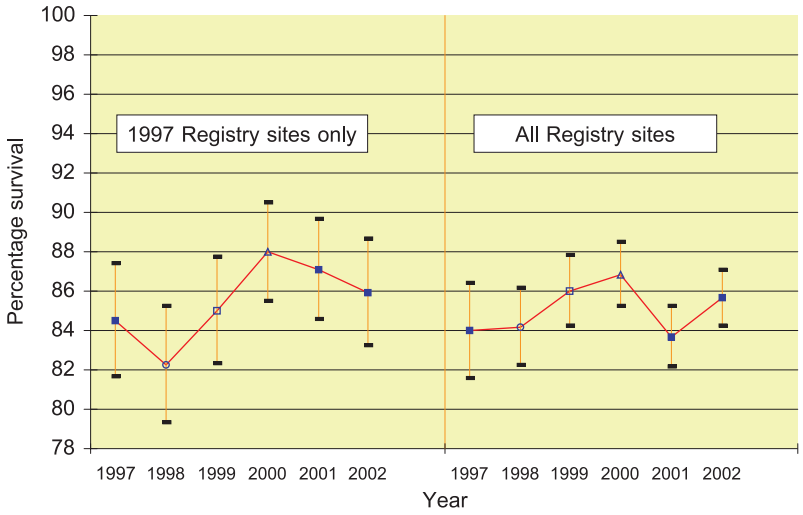

Figure 14.4: Change in one-year after 90 day adjusted (age 60) survival, 1997–2002

Survival of incident patients in 2002 by centre

Comparability of figures for survival within the first 90 days are heavily dependent on consistency between renal units in ensuring that all early chronic renal failure deaths are included and that all acute renal failure patient deaths are excluded. The Registry has contacted units when apparent anomalies in data occur and it is clear there is considerable variability between units in how these decisions are made, so one must be cautious when making comparative assessment of survival in the first 90 days. As the 1 year survival from day 0 of starting renal replacement therapy includes this time period, the more appropriate figure for comparing renal units is the 1 year after 90 days which can also be adjusted for age: results are shown in Figure 14.5 (adjusted to age 60), with their 95% confidence intervals.

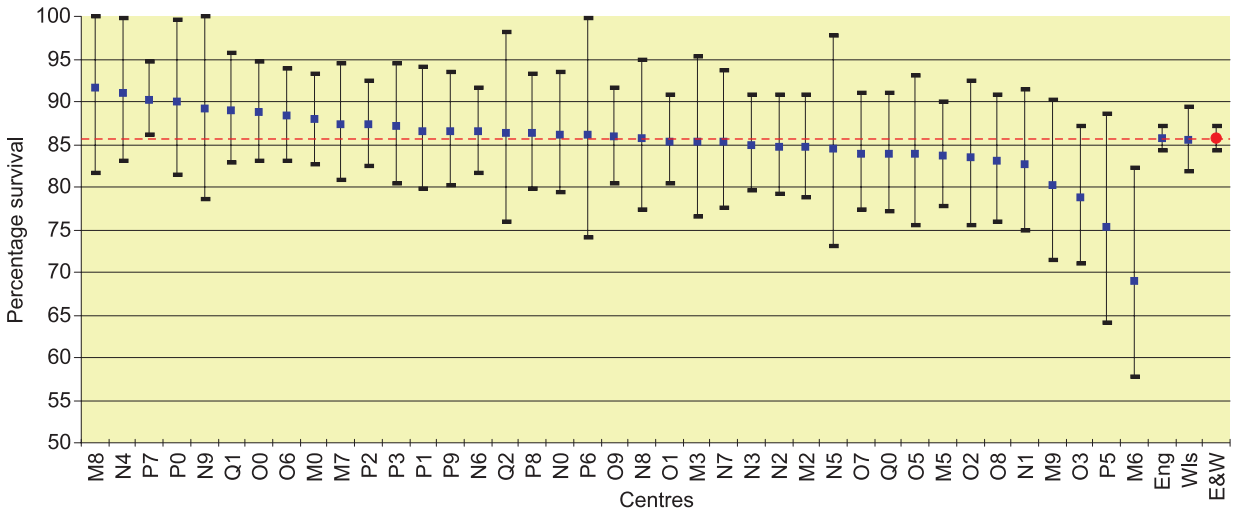

Figure 14.5: Adjusted survival 1 year after 90 days; 2002 cohort

Showing 95% confidence intervals

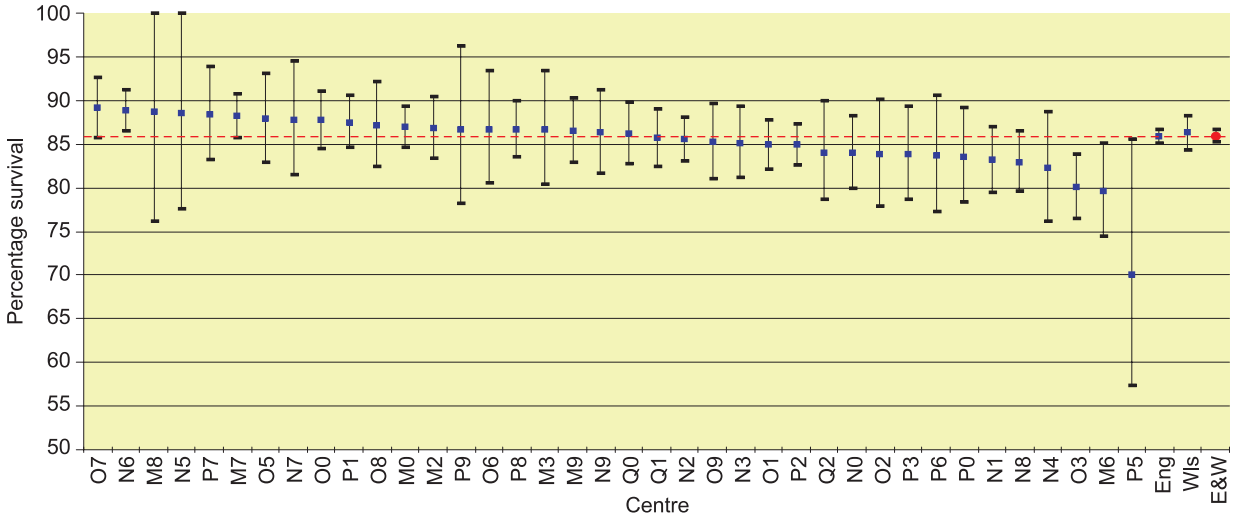

Figure 14.6: Adjusted survival 1 year after 90 days; 1997–2002 cohort

Showing 95% confidence intervals

Survival of incident patients 1997 – 2002 by centre

In the analysis of 2002 data alone, some of the smaller centres have wide confidence intervals. This can be addressed in part by including a larger cohort, including all patients starting RRT 1997–2002: this also assesses sustained performance. Figure 14.6 shows the adjusted survival for 1 year after 90 days in each centre for all new patients starting renal replacement therapy 1997–2002. Some centres have been contributing data to the Renal Registry for only part of this period so they will have fewer years included. The unadjusted data are shown in Table 14.12 at the end of this chapter.

Analysis of centre variability in survival in 1 year after 90 days

These data on survival are shown using funnel plots (see methods section) to identify possible outliers (Figure 14.7). To overcome the variability in centres with small numbers and to assess sustained performance, Figure 14.7 includes data from the 1997–2002 cohorts of patients. In this funnel plot analysis, 2 centres are above 2 standard deviations (SDs) from the national mean and 3 centres are below 2 SDs from the national mean: this requires more detailed investigation by the Registry. The Z-score (adjusted standard deviation) for each of the centres is shown in Table 14.12 at the end of this chapter.

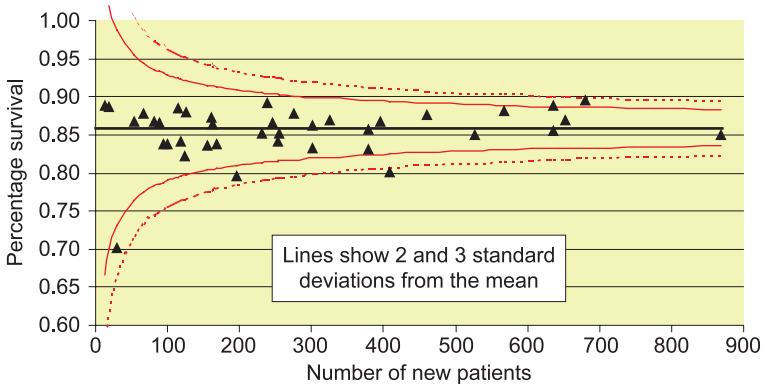

Figure 14.7: Funnel plot for age adjusted 1 year after 90 days survival; 1997–2002 cohorts

This analysis has not been adjusted for co-morbid conditions so it is not possible to conclude that any of these centres have better or worse survival. This highlights the importance of all renal units needing to return data on co-morbidity. In addition there is a wide scatter of results from the different units such that a variation from the mean of 2 standard deviations may not be large enough to indicate statistical significance: 3 standard deviations may be more appropriate.

To adjust survival for case-mix needs better data return from renal units and requires improved methodologies and structure at renal unit level. This is likely to include investment in informatics staff within renal units who would form part of the renal team.

Analysis of centre survival within the first 90 days

The age-adjusted 90-day survivals of patients incident in 2002 are shown in Figure 14.8. The unadjusted data are shown in Table 14.13 at the end of this chapter.

Figure 14.9 shows the age adjusted 90 day survival using a funnel plot for the 1997–2002 cohorts of patients starting on renal replacement therapy. The Z-score (adjusted standard deviation) for each of the centres is shown in Table 14.13 at the end of this chapter.

Although 2 centres are outside 3 SDs from the mean this may either be due to inclusion of patients with acute renal failure or case mix of

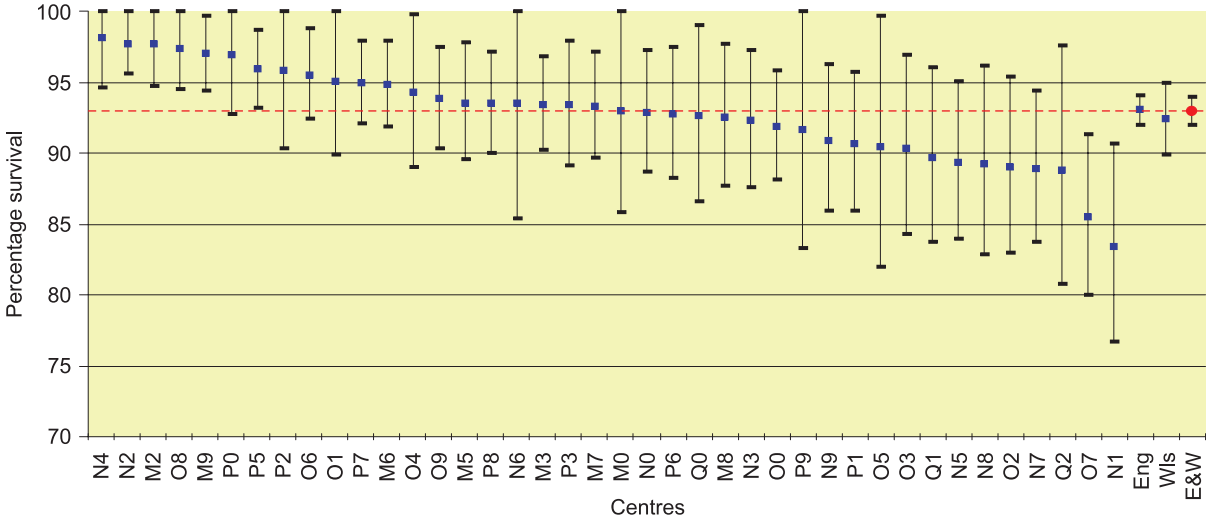

Figure 14.8: Age adjusted survival in the first 90 days; 2002 cohort

Showing 95% confidence intervals

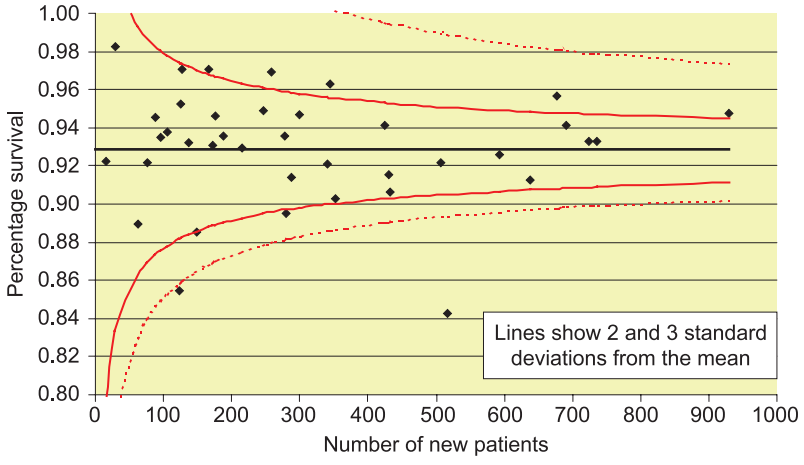

Figure 14.9: Funnel plot for age adjusted 90 days survival; 1997–2002 cohorts

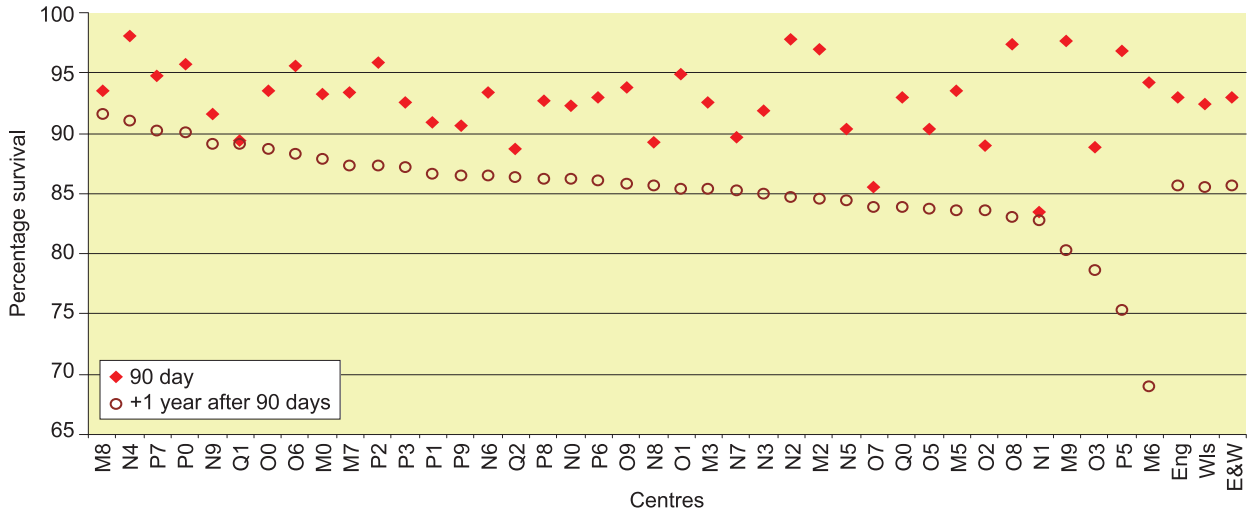

Figure 14.10: Adjusted survival of new patients, 90 day compared with 1 year after 90 days

those starting RRT. This will be investigated in further detail through consultation with these renal units.

Comparison of the 90 day and 1 year after 90 day survival

Similar to previous years, Figure 14.10 demonstrates that there is no relationship between the 1 year after 90 days survival and the survival of patients within the first 90 days. This supports the view that part of this variability is related to the definition of acute renal failure patients, which makes interpretation of the first 90-day survival difficult. No consistency of better or worse than average performance can be inferred.

Changes in survival by centre 1997 – 2002

Annual changes in survival by individual renal units are shown in Figure 14.11.

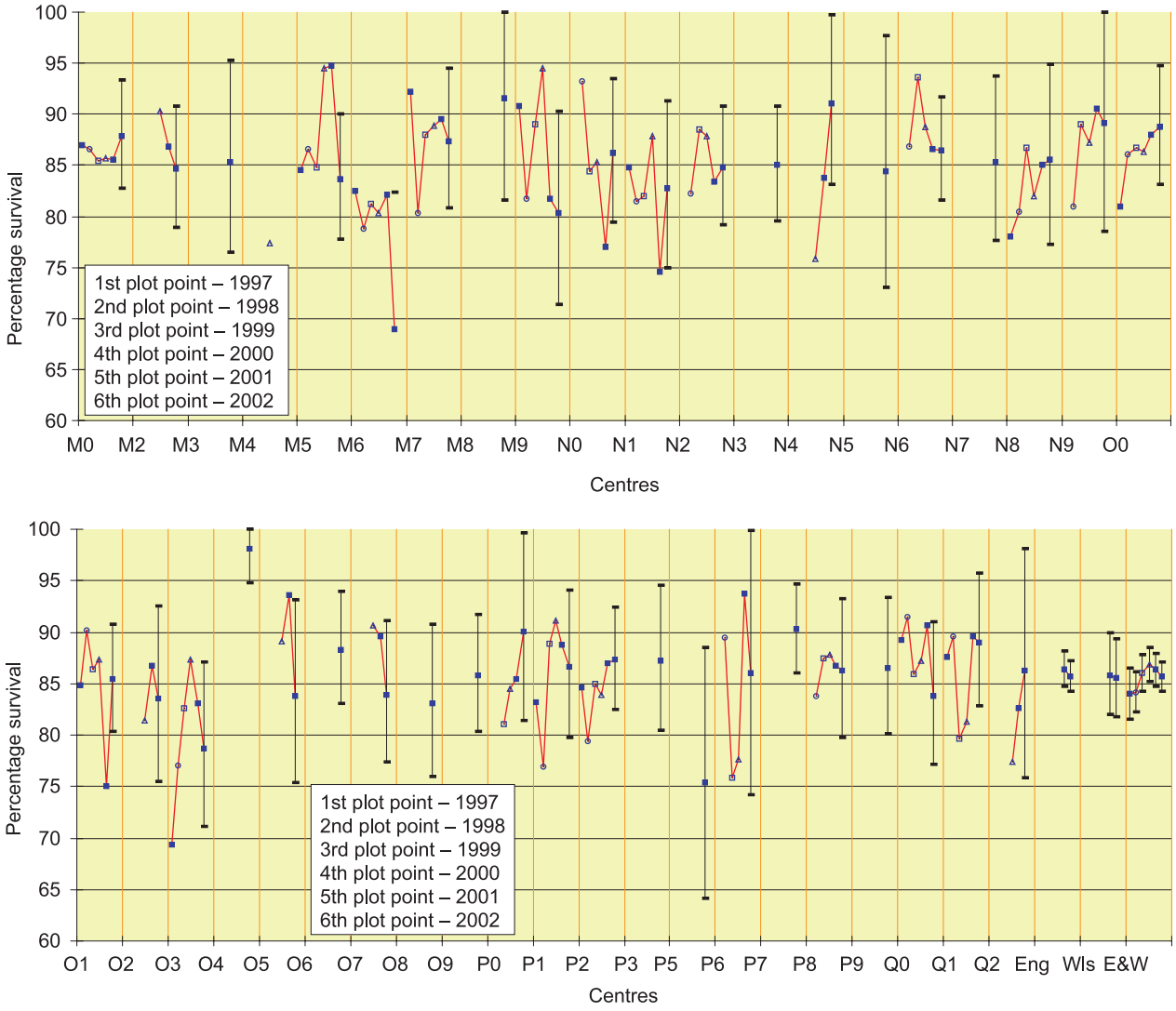

Figure 14.11: Age adjusted survival, 1 year after 90 days; 1997–2002 cohort

Appendix of survival tables

Z-scores

The Z-score expresses the divergence of a renal centre's result from the most probable result (the mean of the Registry) as a number of standard deviations. Z-scores are especially informative when the distributions to which they refer, are normal.

The Z-score is useful when seeking to compare the relative standings of items (ie % survival in an individual centre) from distributions with different means and/or different standard deviations. Since the mean value and standard deviation for % survival depend upon the number and scatter of results from the individual centre, comparison between centres with differing numbers of patients is facilitated by standardising the result.

Mathematically $Z =$

$$\frac{\%\text{ survival in the centre} - \%\text{ survival for all patients}}{\text{Standard deviation of \% survival in the centre}}$$

As the standard deviation in the centre is determined by the number of patients and the scatter of values in the centre, the Z-score adjusts for the variation of patient numbers and the scatter in each centre. From the equation above it follows that a Z-score of 1 means the % survival observed is one standard deviation (for that centre) different from the mean for all centres.

Thus a Z-score above 2 means the result is more than 2 standard deviations from the mean and thus outside the 95% probability: a Z-score above 3 means the result is more than 3 standard deviations from the mean and thus outside the 99.8% probability.

Tables of survival by centre and Z-scores

Table 14.12: 1 year after 90 day survival by centre for 1997–2002

	Unadjusted		Adjusted to age 60 years		
Centre	**1 year after 90 day survival & 95%CI**		**1 year after 90 day survival & 95%CI**		**Z-score**
M0	83.9	81.1–86.7	87.0	84.6–89.4	0.84
M2	86.1	82.3–89.9	86.8	83.3–90.5	0.49
M3	84.1	76.4–91.7	86.6	80.4–93.4	0.21
M5	89.4	87.1–91.7	89.5	87.3–91.9	3.08
M6	76.9	71.0–82.8	79.6	74.5–85.1	−2.32
M7	86.6	83.8–89.4	88.2	85.7–90.7	1.76
M8	84.6	65.0–100.0	88.8	76.1–100.0	0.46
M9	81.2	76.2–86.1	86.5	82.9–90.3	0.32
N0	81.0	76.1–85.8	84.1	80.0–88.3	−0.89
N1	78.4	73.8–83.1	83.2	79.5–87.0	−1.43
N2	82.3	79.4–85.3	85.5	83.0–88.1	−0.31
N3	82.3	77.6–87.0	85.2	81.2–89.3	−0.38
N4	79.5	72.3–86.7	82.2	76.1–88.8	−1.15
N5	84.2	67.8–100.0	88.6	77.5–100.0	0.46
N6	87.2	84.6–89.8	88.8	86.5–91.2	2.43
N7	82.1	72.9–91.3	87.8	81.6–94.5	0.56
N8	78.5	74.4–82.7	83.0	79.6–86.5	−1.69
N9	83.2	77.4–89.0	86.4	81.7–91.3	0.18
O0	82.9	78.4–87.4	87.7	84.5–91.1	1.05
O1	81.9	78.7–85.2	85.0	82.2–87.8	−0.68
O2	75.4	66.7–84.2	83.8	78.0–90.1	−0.68
O3	77.3	73.2–81.3	80.1	76.5–83.8	−3.14
O5	84.8	78.5–91.1	87.9	82.9–93.1	0.75
O6	82.9	74.8–91.1	86.7	80.5–93.4	0.24
O7	86.1	81.7–90.5	89.1	85.7–92.7	1.78
O8	85.5	80.0–91.0	87.2	82.5–92.2	0.51
O9	83.0	78.2–87.9	85.2	81.0–89.6	−0.34
P0	81.1	74.9–87.3	83.6	78.3–89.2	−0.84
P1	86.9	83.8–90.0	87.5	84.6–90.5	1.05
P2	83.2	80.7–85.7	84.9	82.7–87.2	−0.88
P3	82.1	76.2–87.9	83.8	78.7–89.3	−0.78
P5	58.6	40.7–76.5	70.1	57.4–85.6	−2.20
P6	81.0	73.3–88.7	83.7	77.3–90.6	−0.66
P7	86.0	79.6–92.3	88.4	83.3–93.9	0.93
P8	85.6	82.1–89.0	86.7	83.6–90.0	0.48
P9	87.0	78.1–96.0	86.8	78.2–96.2	0.18
Q0	82.3	78.0–86.6	86.2	82.8–89.8	0.17
Q1	83.8	80.1–87.5	85.7	82.4–89.1	−0.15
Q2	77.6	70.0–85.2	84.1	78.6–89.9	−0.65
Eng	83.4	82.6–84.1	85.9	85.2–86.7	−0.10
Wales	83.1	80.8–85.3	86.3	84.4–88.2	0.36
E&W	83.4	82.7–84.1	85.9	85.2–86.7	Ref

Table 14.13 90 day survival by centre for 1997–2002

	Unadjusted		Adjusted to age 60 years		
Centre	1yr after 90 day survival & 95%CI		1 year after 90 day survival & 95%CI		Z-score
M0	90.3	85.1–95.5	93.3	89.7–97.1	0.57
M2	96.3	93.2–99.5	97.0	94.4–99.6	3.69
M3	90.7	83.0–98.5	92.6	86.6–99.0	0.28
M5	92.0	87.7–96.3	93.5	90.0–97.1	0.51
M6	92.9	86.1–99.6	94.3	89.0–99.8	0.06
M7	90.4	84.0–96.7	93.5	89.2–98.0	−1.54
M8	89.5	75.7–100.0	93.5	85.4–100.0	−0.13
M9	95.8	90.2–100.0	97.7	94.7–100.0	4.83
N0	90.2	84.1–96.3	92.3	87.6–97.3	0.56
N1	77.9	69.1–86.7	83.4	76.8–90.6	−1.94
N2	96.9	93.9–99.9	97.7	95.6–100.0	4.15
N3	89.3	84.4–94.3	91.9	88.1–95.9	−0.99
N4	97.1	91.4–100.0	98.1	94.6–100.0	3.23
N5	84.6	70.7–98.5	90.4	82.0–99.7	
N6	90.8	86.4–95.2	93.5	90.2–96.8	1.58
N7	82.8	73.0–92.5	89.7	83.7–96.0	−0.30
N8	84.2	74.7–93.7	89.2	82.8–96.2	−1.12
N9	87.5	74.3–100.0	91.7	83.3–100.0	1.21
O0	89.2	82.5–95.8	93.6	89.5–97.8	1.76
O1	93.3	89.5–97.1	94.9	92.0–97.9	−0.27
O2	82.8	73.6–92.1	89.0	83.0–95.4	0.54
O3	86.4	80.0–92.8	88.9	83.7–94.4	−5.91
O4	92.3	83.9–100.0	95.1	89.9–100.0	
O5	86.7	78.1–95.3	90.4	84.2–97.0	−1.92
O6	93.9	89.5–98.3	95.5	92.4–98.8	0.83
O7	78.7	71.0–86.4	85.5	80.0–91.3	−2.13
O8	95.9	91.5–100.0	97.4	94.6–100.0	3.64
O9	92.2	87.8–96.6	93.8	90.4–97.4	1.66
P0	94.9	87.9–100.0	95.8	90.3–100.0	0.12
P1	87.1	79.9–94.2	90.9	85.9–96.2	−0.63
P2	94.7	91.1–98.3	95.9	93.1–98.7	2.84
P3	90.7	84.6–96.8	92.6	87.7–97.7	0.45
P5	94.7	87.6–100.0	96.9	92.8–100.0	4.16
P6	90.0	79.3–100.0	93.0	85.8–100.0	−2.63
P7	93.2	89.3–97.1	94.8	91.8–97.9	1.44
P8	91.2	85.7–96.7	92.7	88.3–97.4	1.24
P9	87.6	81.3–93.9	90.7	85.9–95.7	−1.07
Q0	89.6	83.5–95.7	92.9	88.7–97.3	−0.61
Q1	86.2	79.2–93.1	89.3	84.0–95.0	−1.76
Q2	82.4	69.5–95.2	88.8	80.7–97.6	0.21
Eng	90.4	89.4–91.4	93.0	92.0–94.1	−0.35
Wales	89.1	85.6–92.5	92.4	89.9–95.0	1.48
E&W	90.3	89.3–91.3	93.0	92.0–94.0	Ref