

Chapter 13

Chronic Peritoneal Dialysis Practices

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Table 13.1.1: Chronic Peritoneal Dialysis Regimes, 1998-2007

| PD regime | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Standard CAPD | 492 | 93 | 577 | 96 | 633 | 97 | 755 | 98 | 837 | 97 |
| DAPD | 32 | 6 | 16 | 3 | 16 | 2 | 17 | 2 | 24 | 3 |
| Automated PD/ CCPD | 6 | 1 | 6 | 1 | 5 | 1 | 2 | 0 | 3 | 0 |
| TOTAL | 530 | 100 | 599 | 100 | 654 | 100 | 774 | 100 | 864 | 100 |

| PD regime | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|-----------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Standard CAPD | 1153 | 97 | 1211 | 96 | 1297 | 93 | 1393 | 90 | 1542 | 86 |
| DAPD | 33 | 3 | 39 | 3 | 45 | 3 | 67 | 4 | 115 | 6 |
| Automated PD/ CCPD | 5 | 0 | 12 | 1 | 50 | 4 | 88 | 6 | 144 | 8 |
| TOTAL | 1191 | 100 | 1262 | 100 | 1392 | 100 | 1548 | 100 | 1801 | 100 |

Table 13.1.2: CAPD Connectology, 1998-2007

| CAPD Connectology | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | |
|----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| UVXD | 10 | 2 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baxter disconnect | 511 | 95 | 347 | 58 | 235 | 39 | 436 | 57 | 719 | 87 |
| B Braun disconnect | 18 | 3 | 248 | 41 | 370 | 61 | 324 | 43 | 93 | 11 |
| Fresenius disconnect | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 1 |
| Others | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOTAL | 539 | 100 | 598 | 100 | 605 | 100 | 760 | 100 | 823 | 100 |

| CAPD Connectology | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|----------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| UVXD | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Baxter disconnect | 1038 | 87 | 1142 | 88 | 1260 | 90 | 1425 | 92 | 1674 | 93 |
| B Braun disconnect | 7 | 1 | 14 | 1 | 1 | 0 | 0 | 0 | 1 | 0 |
| Fresenius disconnect | 154 | 13 | 145 | 11 | 111 | 8 | 119 | 8 | 116 | 6 |
| Others | 1 | 0 | 0 | 0 | 25 | 2 | 6 | 0 | 2 | 0 |
| TOTAL | 1200 | 100 | 1301 | 100 | 1397 | 100 | 1550 | 100 | 1793 | 100 |

Table 13.1.3: CAPD Number of Exchanges per day, 1998-2007

| No. of Exchanges/ day | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 2 | 2 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 |
| 3 | 4 | 1 | 4 | 1 | 1 | 0 | 5 | 1 | 11 | 1 |
| 4 | 508 | 96 | 579 | 97 | 624 | 96 | 735 | 95 | 834 | 96 |
| 5 | 16 | 3 | 13 | 2 | 23 | 4 | 31 | 4 | 28 | 3 |
| TOTAL | 530 | 100 | 596 | 100 | 650 | 100 | 772 | 100 | 873 | 100 |

| No. of Exchanges/ day | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|-----------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| 2 | 4 | 0 | 6 | 0 | 3 | 0 | 4 | 0 | 2 | 0 |
| 3 | 14 | 1 | 12 | 1 | 25 | 2 | 55 | 4 | 40 | 2 |
| 4 | 1136 | 96 | 1225 | 95 | 1280 | 94 | 1359 | 91 | 1566 | 90 |
| 5 | 32 | 3 | 52 | 4 | 48 | 4 | 76 | 5 | 123 | 7 |
| TOTAL | 1186 | 100 | 1295 | 100 | 1356 | 100 | 1494 | 100 | 1731 | 100 |

Table 13.1.4: CAPD Volume per Exchange, 1998– 2007

| Volume per Exchange (L) | 1998 | | 1999 | | 2000 | | 2001 | | 2002 | |
|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| <1.5 | 25 | 5 | 19 | 3 | 25 | 4 | 32 | 4 | 37 | 4 |
| 1.5-1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.0 | 496 | 95 | 557 | 96 | 595 | 95 | 711 | 95 | 793 | 94 |
| >2.0 | 0 | 0 | 2 | 0 | 5 | 1 | 9 | 1 | 14 | 2 |
| TOTAL | 521 | 100 | 578 | 100 | 625 | 100 | 752 | 100 | 844 | 100 |

| Volume per Exchange (L) | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|-------------------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| <1.5 | 41 | 4 | 42 | 3 | 55 | 4 | 50 | 3 | 46 | 3 |
| 1.5-1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2.0 | 1088 | 94 | 1154 | 92 | 1195 | 89 | 1315 | 88 | 1508 | 88 |
| >2.0 | 31 | 3 | 60 | 5 | 92 | 7 | 135 | 9 | 167 | 10 |
| TOTAL | 1160 | 100 | 1256 | 100 | 1342 | 100 | 1500 | 100 | 1721 | 100 |

Table 13.2.1: Distribution of delivered KT/V, CAPD patients 2003-2007

| Year | No. of Subjects | Mean | SD | Median | LQ | UQ | % patients \geq 1.7 per week |
|------|-----------------|------|------|--------|-----|-----|--------------------------------|
| 2003 | 789 | 3.7 | 19.9 | 2.1 | 1.8 | 2.5 | 83 |
| 2004 | 1068 | 2.8 | 9.9 | 2.1 | 1.8 | 2.5 | 85 |
| 2005 | 1124 | 3.3 | 13.7 | 2.1 | 1.8 | 2.5 | 84 |
| 2006 | 1290 | 2.4 | 3.6 | 2.1 | 1.8 | 2.4 | 84 |
| 2007 | 1435 | 2.2 | 0.7 | 2.1 | 1.8 | 2.4 | 83 |

Figure 13.2.1: Cumulative distribution of delivered KT/V, CAPD patients 2003-2007

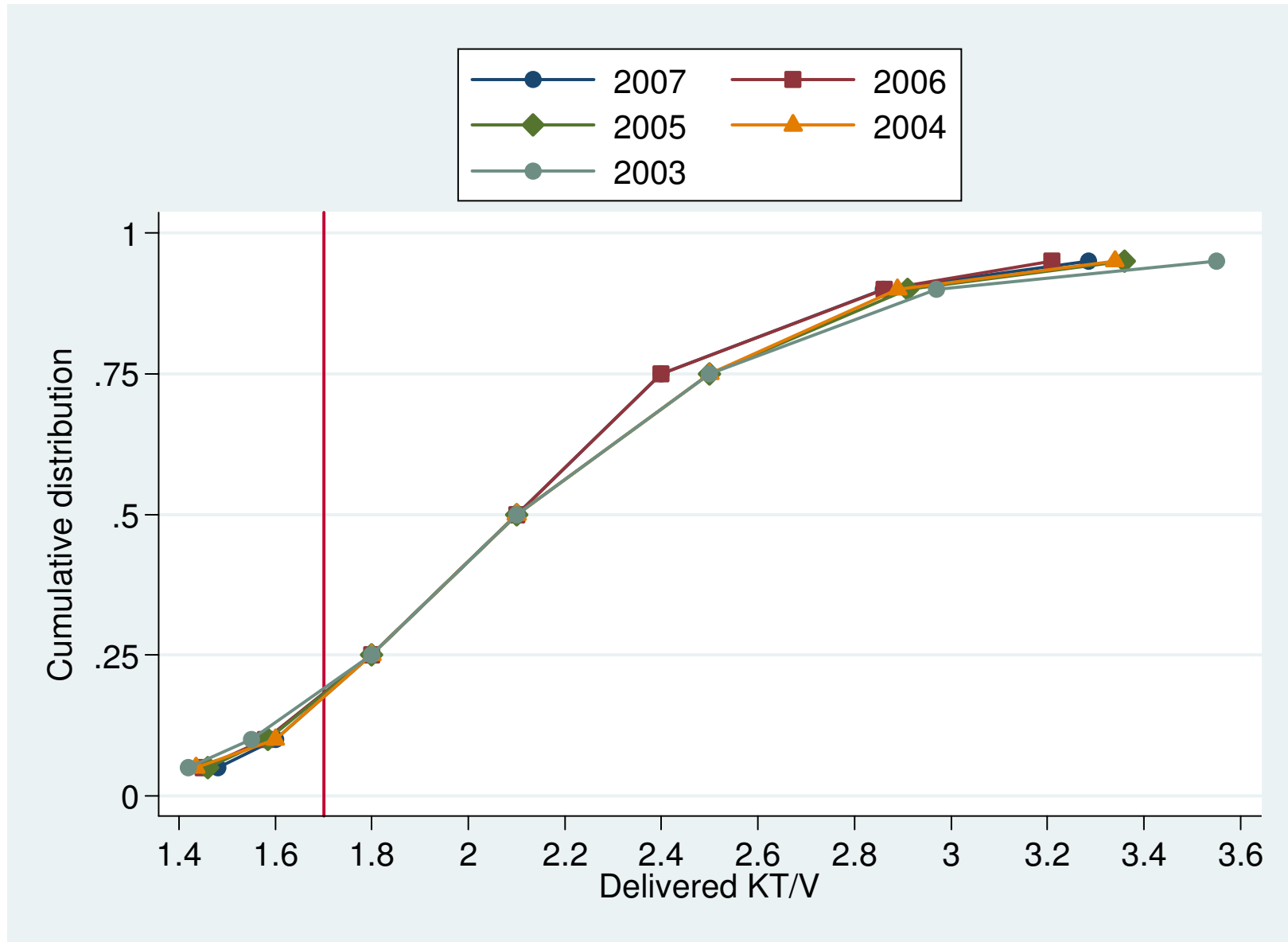


Table 13.2.2: Variation in proportion of patients with KT/V \geq 1.7 per week among CAPD centres 2007

| Year | No. of centres | Min | 5 th Centile | LQ | Median | UQ | 95 th Centile | Max |
|------|----------------|-----|-------------------------|----|--------|----|--------------------------|-----|
| 2003 | 14 | 0 | 0 | 75 | 82.5 | 88 | 91 | 91 |
| 2004 | 17 | 75 | 75 | 79 | 85 | 88 | 100 | 100 |
| 2005 | 18 | 56 | 56 | 75 | 85 | 90 | 97 | 97 |
| 2006 | 21 | 66 | 67 | 77 | 83 | 92 | 100 | 100 |
| 2007 | 21 | 25 | 69 | 80 | 85 | 90 | 93 | 93 |

Figure 13.2.2: Variation in proportion of patients with $KT/V \geq 1.7$ per week among CAPD centres 2007

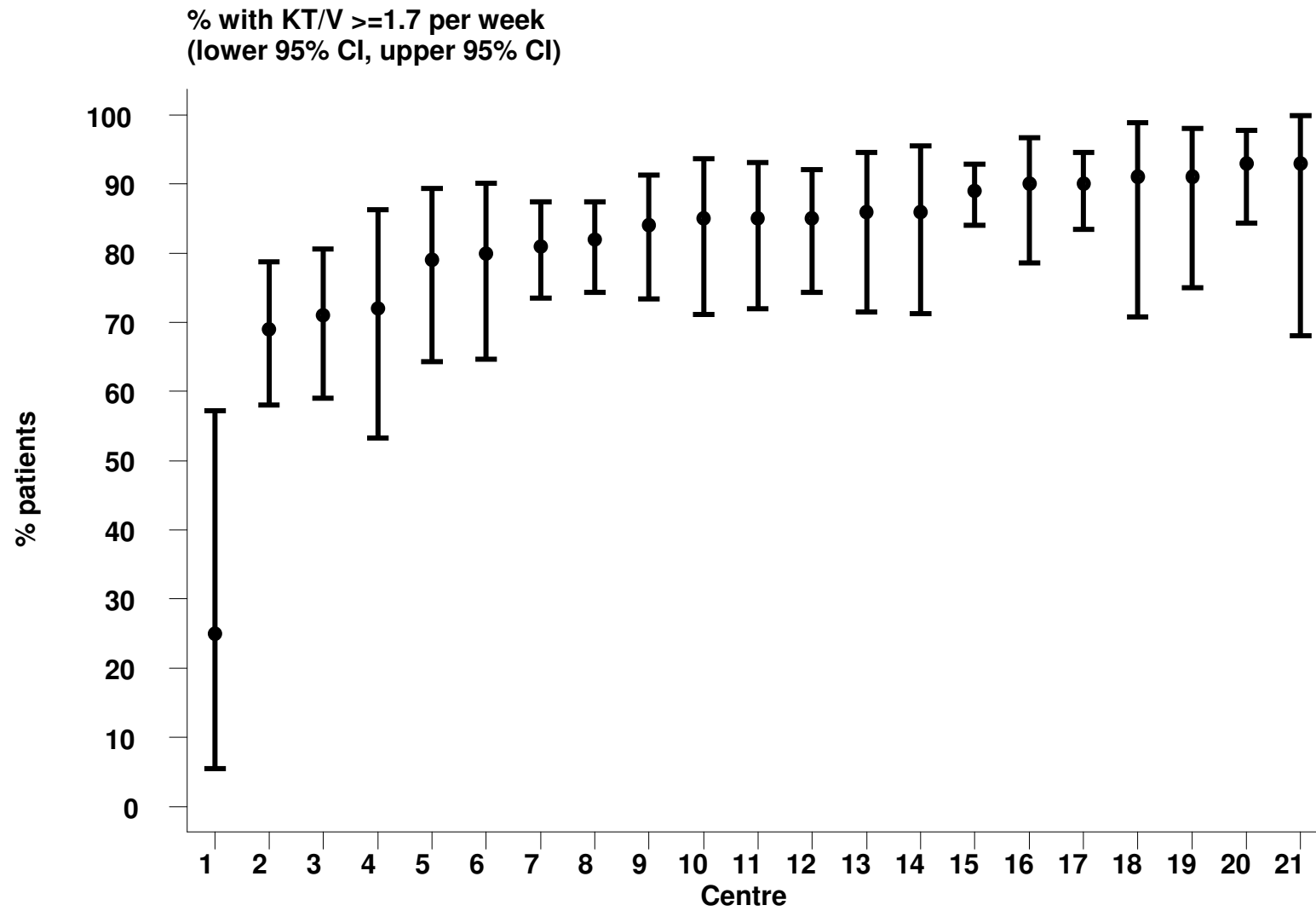


Table 13.2.3: Peritoneal transport status by PET D/P creatinine at 4 hours, new PD patients 2003-2007

| Year | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|-------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Low | 10 | 6 | 67 | 15 | 69 | 12 | 105 | 12 | 106 | 10 |
| Low average | 85 | 51 | 187 | 41 | 246 | 41 | 359 | 42 | 429 | 42 |
| High average | 62 | 37 | 176 | 38 | 223 | 37 | 315 | 37 | 392 | 38 |
| High | 11 | 7 | 29 | 6 | 62 | 10 | 75 | 9 | 95 | 9 |
| TOTAL | 168 | 100 | 459 | 100 | 600 | 100 | 854 | 100 | 1022 | 100 |

Table 13.2.4: Peritoneal transport status by PET D/P creatinine at 4 hours, prevalent PD patients 2003-2007

| Year | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|--------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % |
| Low | 10 | 3 | 39 | 9 | 44 | 13 | 23 | 8 | 19 | 10 |
| Low average | 174 | 44 | 180 | 42 | 130 | 39 | 106 | 38 | 65 | 34 |
| High average | 171 | 43 | 168 | 39 | 118 | 35 | 106 | 38 | 78 | 41 |
| High | 39 | 10 | 41 | 10 | 42 | 13 | 41 | 15 | 28 | 15 |
| TOTAL | 394 | 100 | 428 | 100 | 334 | 100 | 276 | 100 | 190 | 100 |

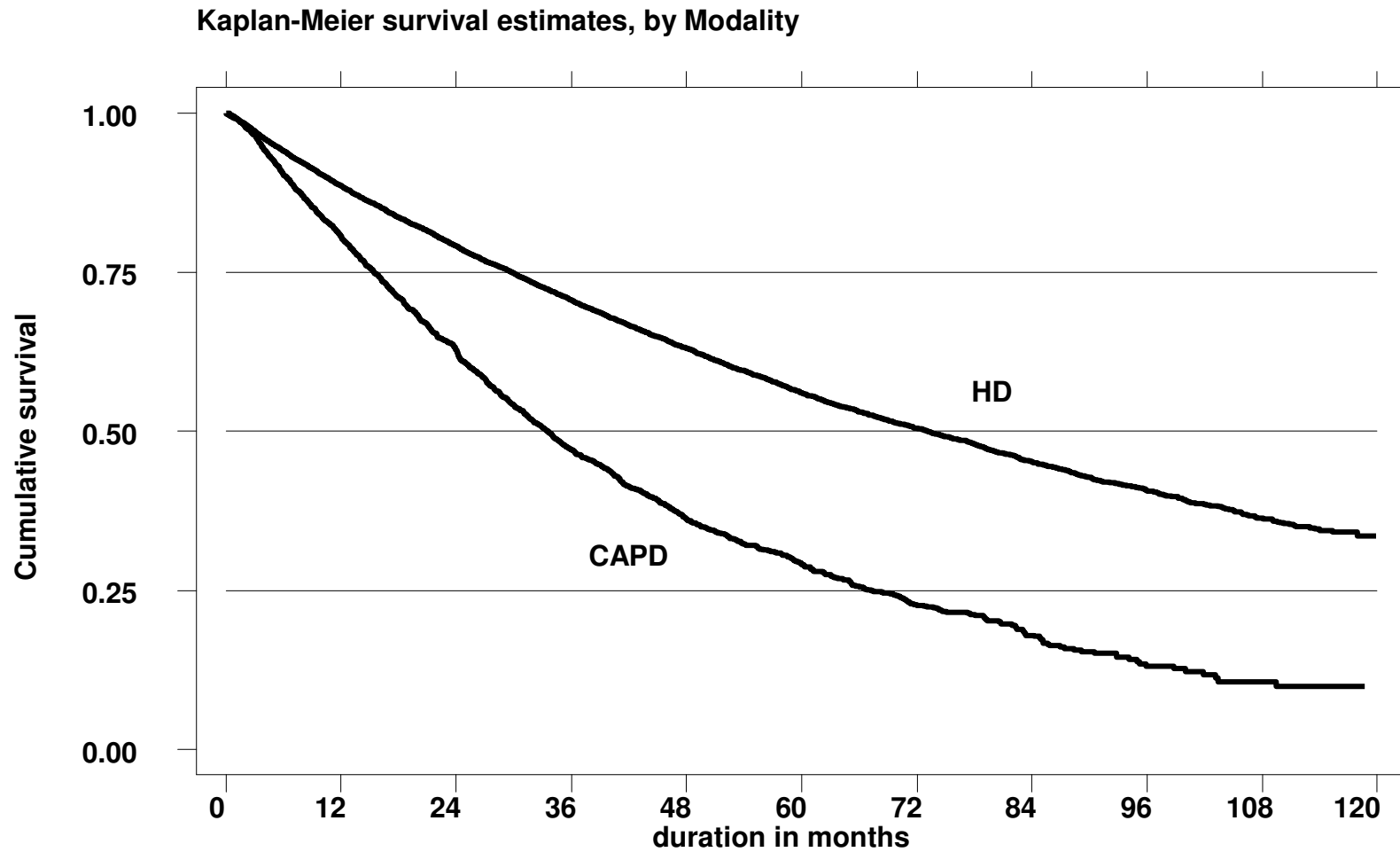
Table 13.2.5 Association among PET and comorbidity, 2003 – 2007

| Comorbidity | Low | | Low Average | | High Average | | High | |
|-------------|-----|------|-------------|------|--------------|-----|------|------|
| | No. | % | No. | % | No. | % | No. | % |
| No CVD | 306 | 12.3 | 1030 | 41.2 | 219 | 8.8 | 942 | 37.7 |
| CVD | 51 | 8.4 | 276 | 45.5 | 53 | 8.7 | 226 | 37.3 |
| No DM | 239 | 13 | 777 | 42.4 | 153 | 8.4 | 663 | 36.2 |
| DM | 118 | 9.3 | 529 | 41.6 | 119 | 9.4 | 505 | 39.7 |

Table 13.3.1: Unadjusted technique survival by Dialysis modality, 1998-2007

| Year Interval (month) | CAPD | | | HD | | | All dialysis | | |
|-----------------------|------|-----------|----|-------|-----------|----|--------------|-----------|----|
| | No. | %Survival | SE | No. | %Survival | SE | No. | %Survival | SE |
| 6 | 2865 | 90 | 1 | 19841 | 94 | 0 | 22706 | 94 | 0 |
| 12 | 2289 | 81 | 1 | 16940 | 89 | 0 | 19229 | 88 | 0 |
| 24 | 1456 | 63 | 1 | 12328 | 79 | 0 | 13784 | 77 | 0 |
| 36 | 910 | 47 | 1 | 8947 | 71 | 0 | 9857 | 68 | 0 |
| 48 | 565 | 36 | 1 | 6322 | 63 | 0 | 6887 | 60 | 0 |
| 60 | 332 | 29 | 1 | 4343 | 56 | 0 | 4675 | 53 | 0 |
| 72 | 178 | 23 | 1 | 2885 | 50 | 0 | 3063 | 47 | 0 |
| 84 | 91 | 18 | 1 | 1785 | 45 | 1 | 1875 | 42 | 1 |
| 96 | 36 | 13 | 1 | 1008 | 41 | 1 | 1043 | 37 | 1 |
| 108 | 16 | 11 | 1 | 419 | 36 | 1 | 434 | 33 | 1 |
| 120 | - | - | - | - | - | - | - | - | - |

Figure 13.3.1: Unadjusted technique survival by Dialysis modality, 1998-2007



CAPD Technique Survival by Dialysis modality 1998-2007

Table 13.3.2: Unadjusted technique survival by year of entry, 1998-2007

| Year Interval (month) | 1998 | | | 1999 | | | 2000 | | | 2001 | | |
|-----------------------|------|------------|----|------|------------|----|------|------------|----|------|------------|----|
| | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE |
| 6 | 144 | 92 | 2 | 189 | 90 | 2 | 206 | 91 | 2 | 303 | 90 | 2 |
| 12 | 128 | 83 | 3 | 175 | 84 | 3 | 185 | 81 | 3 | 266 | 80 | 2 |
| 24 | 96 | 65 | 4 | 117 | 58 | 3 | 138 | 63 | 3 | 198 | 61 | 3 |
| 36 | 75 | 51 | 4 | 78 | 39 | 3 | 101 | 46 | 3 | 151 | 47 | 3 |
| 48 | 59 | 40 | 4 | 57 | 29 | 3 | 78 | 36 | 3 | 107 | 34 | 3 |
| 60 | 45 | 32 | 4 | 50 | 25 | 3 | 67 | 31 | 3 | 78 | 25 | 2 |
| 72 | 34 | 25 | 4 | 37 | 19 | 3 | 47 | 22 | 3 | 63 | 21 | 2 |
| 84 | 30 | 22 | 3 | 27 | 15 | 3 | 36 | 18 | 3 | - | - | - |
| 96 | 20 | 15 | 3 | 17 | 9 | 2 | - | - | - | - | - | - |
| 108 | 16 | 12 | 3 | - | - | - | - | - | - | - | - | - |
| 120 | - | - | - | - | - | - | - | - | - | - | - | - |

| Year Interval (month) | 2002 | | | 2003 | | | 2004 | | | 2005 | | |
|-----------------------|------|------------|----|------|------------|----|------|------------|----|------|------------|----|
| | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE |
| 6 | 342 | 92 | 1 | 369 | 89 | 2 | 302 | 89 | 2 | 322 | 89 | 2 |
| 12 | 293 | 80 | 2 | 332 | 80 | 2 | 266 | 79 | 2 | 280 | 79 | 2 |
| 24 | 228 | 64 | 3 | 254 | 63 | 2 | 213 | 66 | 3 | 219 | 63 | 3 |
| 36 | 165 | 47 | 3 | 183 | 46 | 2 | 163 | 51 | 3 | - | - | - |
| 48 | 126 | 37 | 3 | 142 | 36 | 2 | - | - | - | - | - | - |
| 60 | 96 | 29 | 2 | - | - | - | - | - | - | - | - | - |
| 72 | - | - | - | - | - | - | - | - | - | - | - | - |

| Year Interval (month) | 2006 | | | 2007 | | |
|-----------------------|------|------------|----|------|------------|----|
| | No | % Survival | SE | No | % Survival | SE |
| 6 | 427 | 93 | 1 | 269 | 90 | 1 |
| 12 | 370 | 81 | 2 | 3 | - | - |
| 24 | - | - | - | - | - | - |

Figure 13.3.2: Unadjusted technique survival by year of entry, 1998-2007

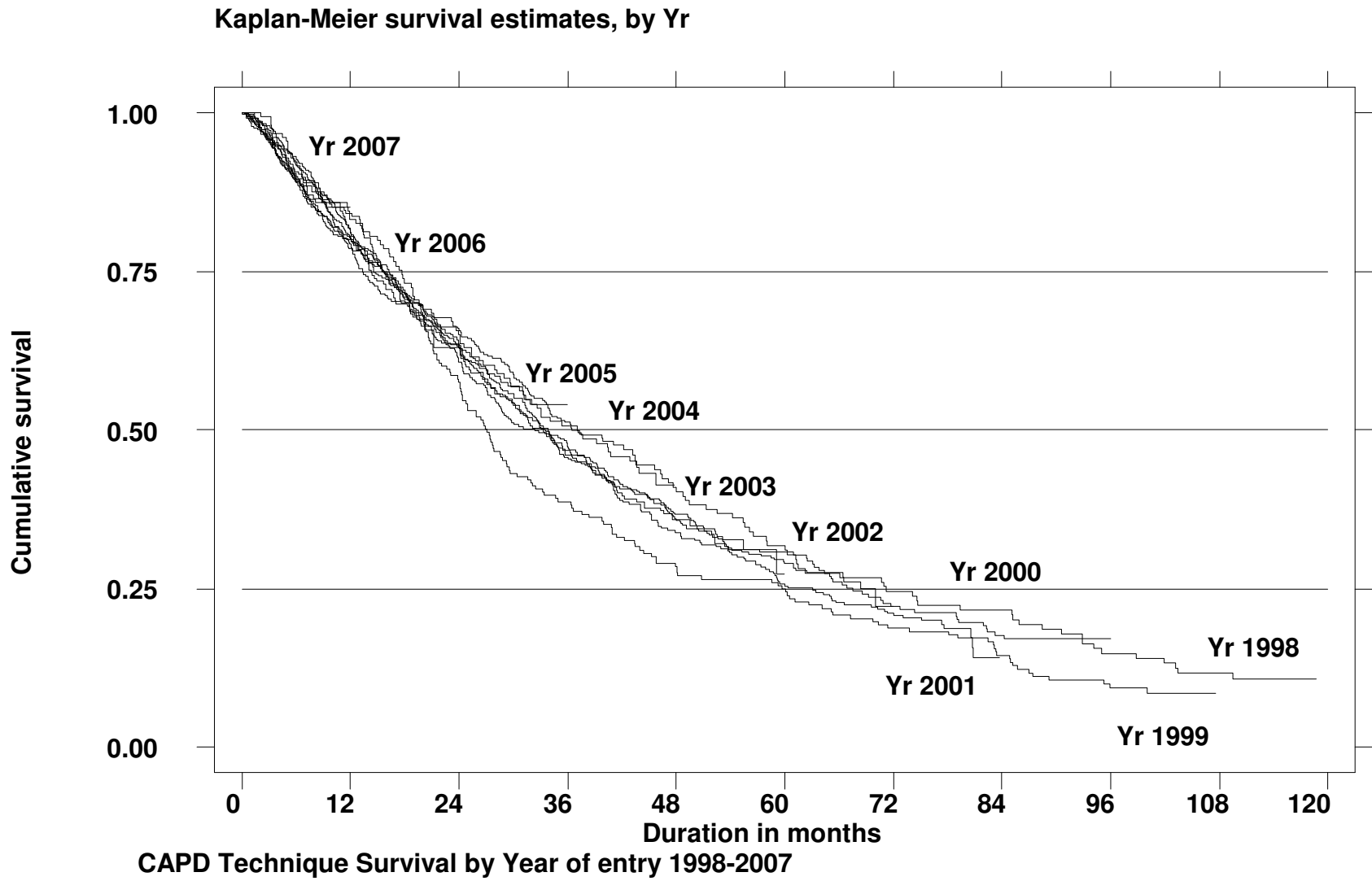


Table 13.3.3: Unadjusted technique survival by age, 1998-2007

| Age group (years) Interval (month) | <=14 | | | 15-24 | | | 25-34 | | | 35-44 | | |
|--|------|---------------|----|-------|---------------|----|-------|---------------|----|-------|---------------|----|
| | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE |
| 6 | 314 | 97 | 1 | 1021 | 96 | 1 | 1761 | 96 | 0 | 3062 | 96 | 0 |
| 12 | 280 | 94 | 1 | 877 | 91 | 1 | 1537 | 93 | 1 | 2651 | 91 | 0 |
| 24 | 204 | 82 | 2 | 630 | 83 | 1 | 1170 | 88 | 1 | 2052 | 85 | 1 |
| 36 | 141 | 73 | 3 | 481 | 78 | 1 | 924 | 83 | 1 | 1598 | 79 | 1 |
| 48 | 104 | 67 | 3 | 350 | 73 | 2 | 723 | 79 | 1 | 1214 | 74 | 1 |
| 60 | 71 | 60 | 4 | 249 | 68 | 2 | 537 | 75 | 1 | 916 | 69 | 1 |
| 72 | 40 | 52 | 4 | 175 | 66 | 2 | 374 | 71 | 1 | 654 | 65 | 1 |
| 84 | 26 | 47 | 5 | 109 | 60 | 2 | 270 | 68 | 2 | 423 | 60 | 1 |
| 96 | 11 | 39 | 6 | 62 | 56 | 3 | 169 | 65 | 2 | 243 | 57 | 1 |
| 108 | 6 | 39 | 6 | 26 | 55 | 3 | 77 | 63 | 2 | 113 | 52 | 1 |
| 120 | - | - | - | - | - | - | - | - | - | - | - | - |

| Age group (years) Interval (month) | 45-54 | | | 55-64 | | | >=65 | | |
|--|-------|---------------|----|-------|---------------|----|------|---------------|----|
| | No | % Survival | SE | No | % Survival | SE | No | % Survival | SE |
| 6 | 5767 | 95 | 0 | 6198 | 93 | 0 | 4584 | 90 | 0 |
| 12 | 4936 | 89 | 0 | 5207 | 86 | 0 | 3743 | 82 | 1 |
| 24 | 3593 | 80 | 1 | 3686 | 74 | 1 | 2454 | 67 | 1 |
| 36 | 2635 | 71 | 1 | 2522 | 63 | 1 | 1561 | 54 | 1 |
| 48 | 1861 | 64 | 1 | 1696 | 53 | 1 | 941 | 43 | 1 |
| 60 | 1309 | 57 | 1 | 1061 | 44 | 1 | 534 | 34 | 1 |
| 72 | 865 | 51 | 1 | 640 | 37 | 1 | 318 | 29 | 1 |
| 84 | 543 | 46 | 1 | 365 | 31 | 1 | 147 | 22 | 1 |
| 96 | 300 | 40 | 1 | 195 | 26 | 1 | 70 | 17 | 1 |
| 108 | 113 | 34 | 1 | 77 | 23 | 1 | 28 | 13 | 1 |
| 120 | - | - | - | - | - | - | - | - | - |

Figure 13.3.3: Unadjusted technique survival by age, 1998-2007

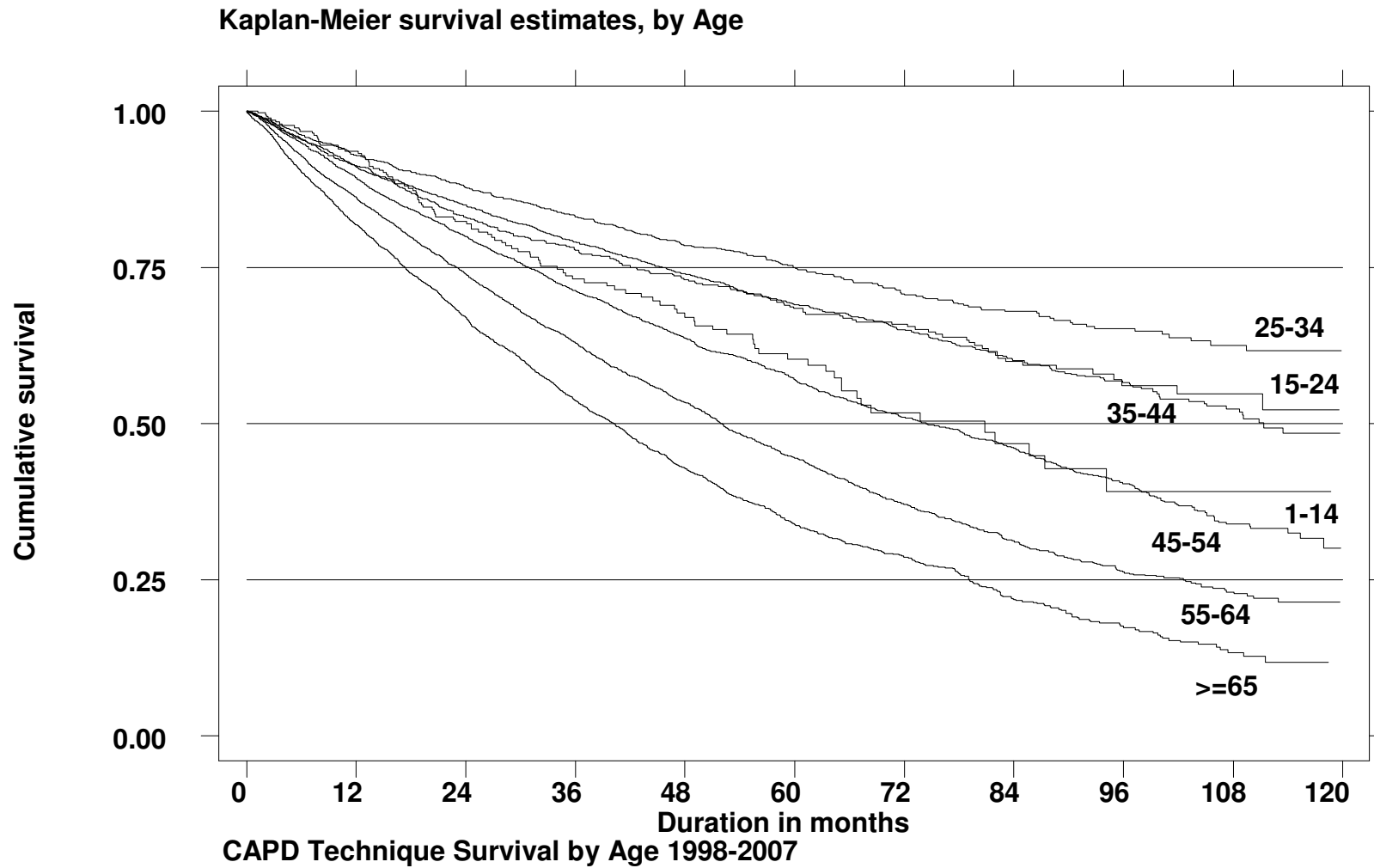


Table 13.3.4: Unadjusted technique survival by Gender, 1998-2007

| Gender Interval (months) | Male | | | Female | | |
|-----------------------------|------|------------|----|--------|------------|----|
| | No | % survival | SE | No | % survival | SE |
| 6 | 1448 | 91 | 1 | 1417 | 89 | 1 |
| 12 | 1138 | 81 | 1 | 1152 | 80 | 1 |
| 24 | 723 | 63 | 1 | 735 | 63 | 1 |
| 36 | 441 | 46 | 1 | 471 | 49 | 1 |
| 48 | 269 | 34 | 1 | 297 | 39 | 1 |
| 60 | 150 | 26 | 1 | 184 | 33 | 2 |
| 72 | 80 | 21 | 2 | 99 | 25 | 2 |
| 84 | 39 | 15 | 2 | 53 | 21 | 2 |
| 96 | 16 | 11 | 2 | 21 | 15 | 2 |
| 108 | 9 | 10 | 2 | 8 | 12 | 2 |
| 120 | - | - | - | - | - | - |

Figure 13.3.4: Unadjusted technique survival by Gender, 1998-2007

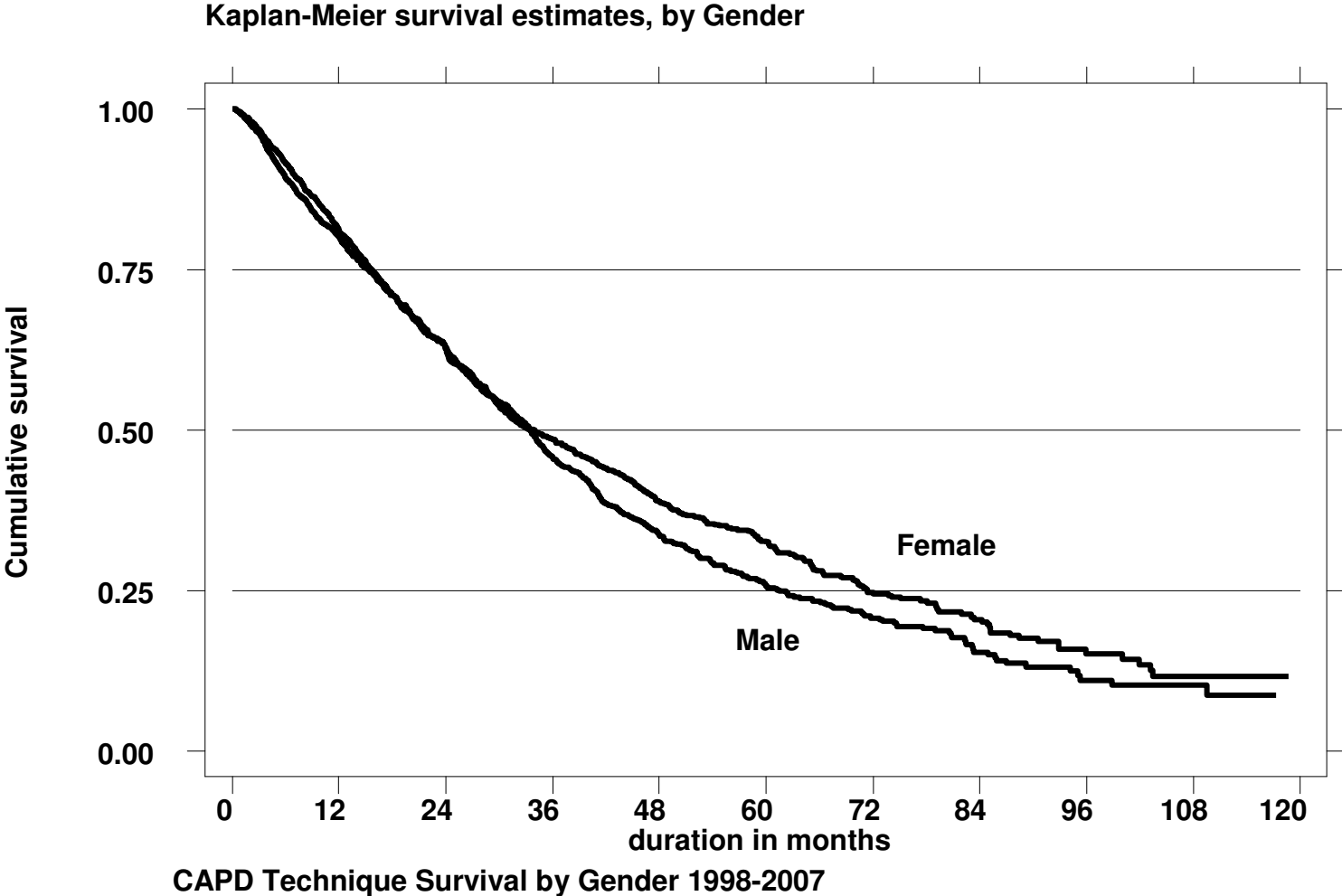


Table 13.3.5: Unadjusted technique survival by Diabetes status, 1998-2007

| Diabetes status Interval (month) | Non-Diabetic | | | Diabetic | | |
|-------------------------------------|--------------|------------|----|----------|------------|----|
| | No | % survival | SE | No | % survival | SE |
| 6 | 1639 | 93 | 1 | 1226 | 87 | 1 |
| 12 | 1378 | 86 | 1 | 911 | 74 | 1 |
| 24 | 945 | 72 | 1 | 511 | 51 | 1 |
| 36 | 658 | 59 | 1 | 253 | 31 | 1 |
| 48 | 438 | 48 | 1 | 128 | 20 | 1 |
| 60 | 270 | 41 | 2 | 63 | 13 | 1 |
| 72 | 147 | 33 | 2 | 32 | 9 | 1 |
| 84 | 74 | 26 | 2 | 18 | 7 | 1 |
| 96 | 31 | 20 | 2 | 6 | 5 | 1 |
| 108 | 15 | 17 | 2 | 2 | 2 | 1 |
| 120 | - | - | - | - | - | - |

Figure 13.3.5: Unadjusted technique survival by Diabetes status, 1998-2007

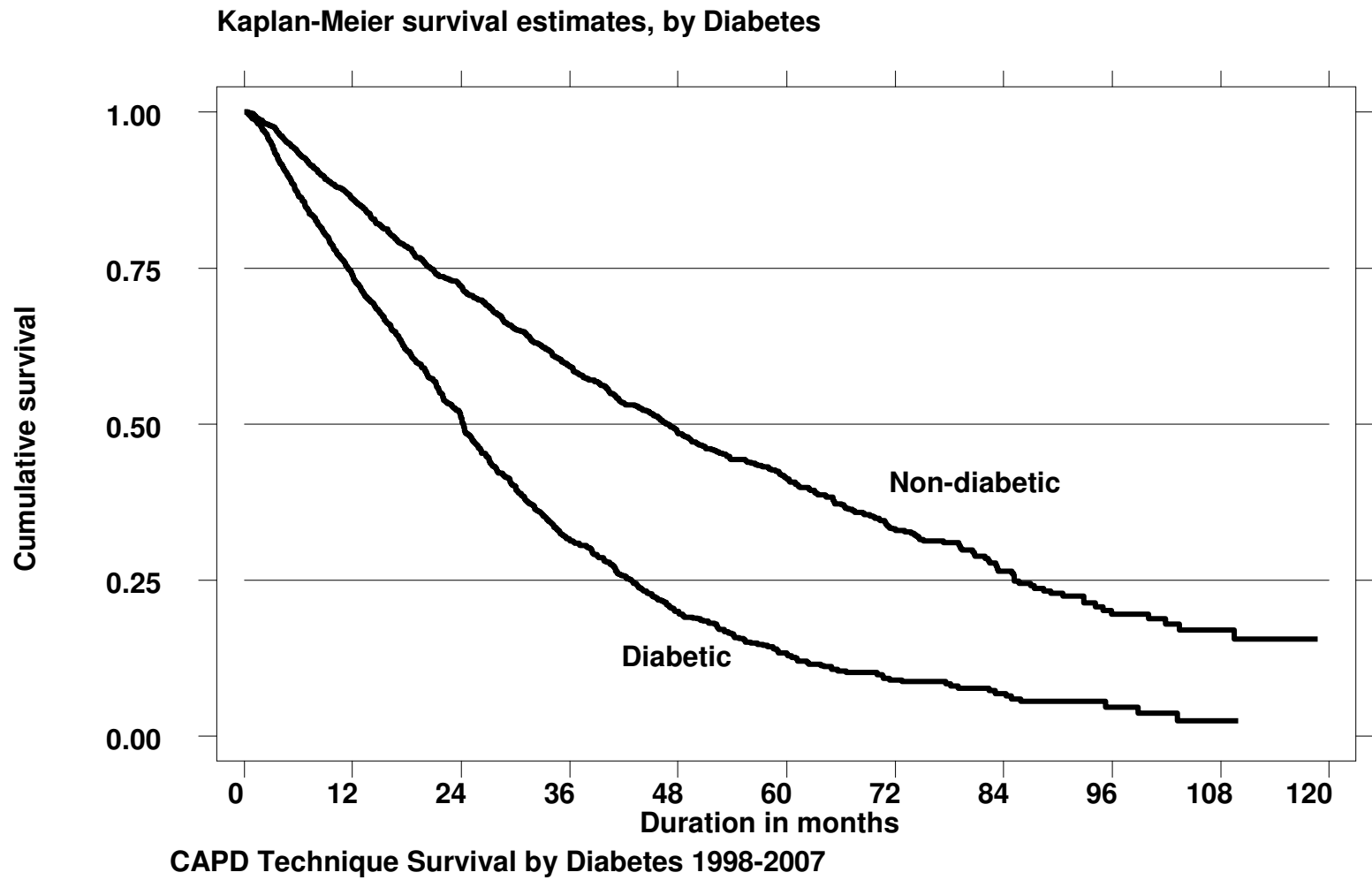


Table 13.3.6 Unadjusted technique survival by Kt/V, 1998-2007

| KT/V Interval (months) | <1.7 | | | 1.7-2.0 | | | >2.0 | | |
|------------------------------|------|------------|----|---------|------------|----|------|------------|----|
| | No. | % Survival | SE | No. | % Survival | SE | No. | % Survival | SE |
| 6 | 898 | 99 | 0 | 1381 | 99 | 0 | 3217 | 99 | 0 |
| 12 | 823 | 95 | 1 | 1301 | 96 | 1 | 2964 | 96 | 0 |
| 24 | 709 | 89 | 1 | 1065 | 88 | 1 | 2392 | 88 | 1 |
| 36 | 556 | 79 | 1 | 857 | 79 | 1 | 1773 | 77 | 1 |
| 48 | 391 | 66 | 2 | 625 | 67 | 1 | 1289 | 69 | 1 |
| 60 | 232 | 52 | 2 | 392 | 58 | 2 | 883 | 63 | 1 |
| 72 | 117 | 43 | 2 | 260 | 52 | 2 | 595 | 57 | 1 |
| 84 | 72 | 34 | 3 | 144 | 43 | 2 | 391 | 50 | 1 |
| 96 | 45 | 28 | 3 | 80 | 35 | 2 | 245 | 42 | 1 |
| 108 | 31 | 23 | 3 | 61 | 32 | 2 | 166 | 37 | 2 |
| 120 | 16 | 20 | 3 | 33 | 19 | 3 | 94 | 31 | 2 |

Figure 13.3.6 Unadjusted technique survival by Kt/V, 1998 -2007

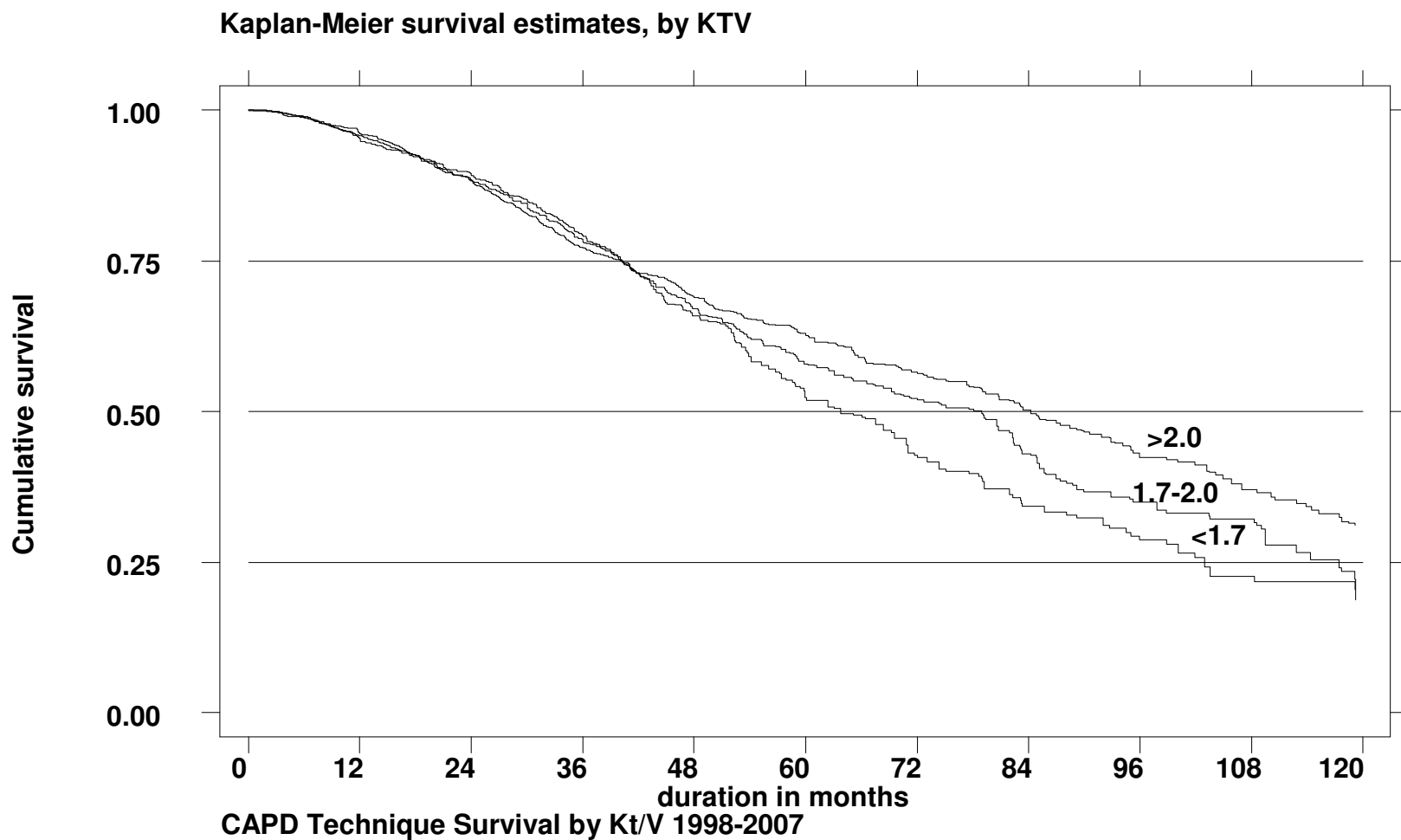


Table 13.4.1: Adjusted Hazard Ratio for patient mortality

| Factors | N | Hazard Ratio | 95% CI | p value |
|-------------------------------|--------------|--------------|-------------|---------|
| Age (years): | | | | |
| Age 1-14 ^{ref} | 257 | 1.00 | | |
| Age 15-24 | 311 | 1.85 | (1.37 2.48) | 0.000 |
| Age 25-34 | 286 | 1.96 | (1.42 2.70) | 0.000 |
| Age 35-44 | 437 | 2.21 | (1.62 3.01) | 0.000 |
| Age 45-54 | 737 | 2.55 | (1.85 3.50) | 0.000 |
| Age 55-64 | 767 | 2.94 | (2.17 4.00) | 0.000 |
| Age >=65 | 482 | 4.09 | (2.96 5.66) | 0.000 |
| Peritonitis | | | | |
| No ^{ref} | 3,049 | 1.00 | | |
| Yes | 228 | 2.28 | (1.96 2.65) | 0.000 |
| Diabetes Mellitus | | | | |
| Non-diabetic ^{ref} | 1,810 | 1.00 | | |
| Diabetic | 1,467 | 1.55 | (1.34 1.78) | 0.000 |
| Gender | | | | |
| Male ^{ref} | 1,639 | 1.00 | | |
| Female | 1,638 | 0.92 | (0.82 1.04) | 0.175 |
| Year start dialysis: | | | | |
| Year 1998-1999 ^{ref} | 325 | 1.00 | | |
| Year 2000-2001 | 516 | 1.10 | (0.94 1.30) | 0.239 |
| Year 2002-2003 | 756 | 1.16 | (0.99 1.36) | 0.073 |
| Year 2004-2007 | 1,680 | 1.05 | (0.89 1.25) | 0.549 |
| Cardiovascular Disease: | | | | |
| No CVD ^{ref} | 2,520 | 1.00 | | |
| CVD | 757 | 1.31 | (1.16 1.48) | 0.000 |
| BMI: | | | | |
| <18.5 | 530 | 1.31 | (1.11 1.54) | 0.001 |
| 18.5-<25 ^{ref} | 1,775 | 1.00 | | |
| >=25 | 972 | 0.83 | (0.74 0.94) | 0.002 |

Table 13.4.1: Adjusted Hazard Ratio for patient mortality (cont)

| Factors | N | Hazard Ratio | 95% CI | p value |
|----------------------------|--------------|--------------|-------------|---------|
| Serum Albumin: | | | | |
| <30 | 866 | 1.81 | (1.58 2.09) | 0.000 |
| 30-<35 | 1,124 | 1.31 | (1.15 1.49) | 0.000 |
| 35-<45 ^{ref} | 964 | 1.00 | | |
| >=45 | 323 | 1.10 | (0.87 1.40) | 0.418 |
| Serum Cholesterol: | | | | |
| <3.2 | 63 | 1.77 | (1.22 2.55) | 0.002 |
| 3.2-<5.2 ^{ref} | 1,557 | 1.00 | | |
| >=5.2 | 1,657 | 1.13 | (1.01 1.25) | 0.026 |
| Diastolic BP: | | | | |
| <70 | 373 | 1.17 | (0.99 1.40) | 0.073 |
| 70-<80 | 1,018 | 0.93 | (0.82 1.05) | 0.226 |
| 80-<90 ^{ref} | 1,375 | 1.00 | | |
| 90-<100 | 428 | 1.40 | (1.19 1.64) | 0.000 |
| >=100 | 83 | 1.88 | (1.38 2.57) | 0.000 |
| Hemoglobin: | | | | |
| <8 | 218 | 2.04 | (1.63 2.57) | 0.000 |
| 8-<9 | 456 | 1.63 | (1.35 1.98) | 0.000 |
| 9-<10 | 848 | 1.35 | (1.15 1.60) | 0.000 |
| 10-<11 | 910 | 1.01 | (0.86 1.19) | 0.898 |
| 11-<12 ^{ref} | 537 | 1.00 | | |
| >=12 | 308 | 0.96 | (0.77 1.20) | 0.749 |
| Serum Calcium: | | | | |
| <2.2 | 1,118 | 1.14 | (1.01 1.29) | 0.038 |
| 2.2-<2.6 ^{ref} | 2,030 | 1.00 | | |
| >=2.6 | 129 | 1.81 | (1.43 2.28) | 0.000 |
| Calcium Phosphate product: | | | | |
| <3.5 | 1,750 | 1.17 | (0.99 1.39) | 0.070 |
| 3.5-<4.5 ^{ref} | 984 | 1.00 | | |
| 4.5-<5.5 | 413 | 0.91 | (0.72 1.15) | 0.415 |
| >=5.5 | 130 | 0.72 | (0.45 1.14) | 0.156 |

Table 13.4.1: Adjusted Hazard Ratio for patient mortality (cont)

| Factors | N | Hazard Ratio | 95% CI | p value |
|--------------------------|--------------|--------------|-------------|---------|
| Serum Phosphate: | | | | |
| <1.6 ^{ref} | 1,903 | 1.00 | | |
| 1.6-<2.0 | 888 | 0.83 | (0.69 1.00) | 0.044 |
| 2.0-<2.2 | 233 | 1.04 | (0.76 1.42) | 0.802 |
| 2.2-<2.4 | 115 | 1.16 | (0.78 1.72) | 0.472 |
| 2.4-<2.6 | 70 | 1.45 | (0.87 2.41) | 0.157 |
| >=2.6 | 68 | 1.59 | (0.87 2.94) | 0.135 |
| KT/V | | | | |
| <=1.7 ^{ref} | 2,176 | 1.00 | | |
| >1.7 | 1,101 | 0.97 | (0.79 1.17) | 0.722 |
| Assisted PD | | | | |
| Self care ^{ref} | 1,934 | 1.00 | | |
| Assisted | 1,277 | 1.33 | (1.18 1.50) | 0.000 |

Table 13.3.8 Reasons for change of dialysis modality to HD, 1998-2007

| Cause | No. | Percentage |
|----------------------------|-----|------------|
| Peritonitis | 302 | 40 |
| Catheter related infection | 24 | 3 |
| Membrane failure | 135 | 18 |
| Technical problem | 60 | 8 |
| Patient preference | 120 | 16 |
| Others | 71 | 9 |
| Unknown | 38 | 5 |
| Total | 750 | 100 |

Table 13.4.1: Adjusted Hazard Ratio for patient mortality

| Factors | N | Hazard Ratio | 95% CI | p value |
|-------------------------------|-------|--------------|--------------|---------|
| Age (years): | | | | |
| Age 1-14 ^{ref} | 257 | 1.00 | | |
| Age 15-24 | 311 | 2.09 | (1.03 3.36) | 0.002 |
| Age 25-34 | 286 | 1.88 | (1.11 3.17) | 0.018 |
| Age 35-44 | 437 | 2.92 | (1.82 4.69) | 0.000 |
| Age 45-54 | 737 | 4.64 | (2.89 7.44) | 0.000 |
| Age 55-64 | 767 | 5.42 | (3.42 8.57) | 0.000 |
| Age >=65 | 482 | 7.73 | (4.81 12.43) | 0.000 |
| Diabetes Mellitus | | | | |
| Non-diabetic ^{ref} | 1,810 | 1.00 | | |
| Diabetic | 1,467 | 1.95 | (1.62 2.34) | 0.000 |
| Gender | | | | |
| Male ^{ref} | 1,639 | 1.00 | | |
| Female | 1,638 | 0.89 | (0.77 1.03) | 0.118 |
| Year start dialysis: | | | | |
| Year 1998-1999 ^{ref} | 325 | 1.00 | | |
| Year 2000-2001 | 516 | 0.92 | (0.75 1.13) | 0.427 |
| Year 2002-2003 | 756 | 1.05 | (0.86 1.29) | 0.613 |
| Year 2004-2007 | 1,680 | 0.92 | (0.74 1.13) | 0.417 |
| Cardiovascular Disease: | | | | |
| No CVD ^{ref} | 2,520 | 1.00 | | |
| CVD | 757 | 1.51 | (1.31 1.75) | 0.000 |
| BMI: | | | | |
| <18.5 | 530 | 1.43 | (1.15 1.78) | 0.001 |
| 18.5-<25 ^{ref} | 1,775 | 1.00 | | |
| >=25 | 972 | 0.76 | (0.66 0.89) | 0.000 |

Table 13.4.1: Adjusted Hazard Ratio for patient mortality (cont)

| Factors | N | Hazard Ratio | 95% CI | p value |
|-----------------------------------|-------|--------------|-------------|---------|
| Serum Albumin: | | | | |
| <30 | 866 | 2.04 | (1.71 2.45) | 0.000 |
| 30-<35 | 1,124 | 1.34 | (1.13 1.60) | 0.001 |
| 35-<45 ^{ref} | 964 | 1.00 | | |
| >=45 | 323 | 1.06 | (0.77 1.48) | 0.711 |
| Diastolic BP: | | | | |
| <70 | 373 | 1.27 | (1.03 1.56) | 0.025 |
| 70-<80 | 1,018 | 0.92 | (0.79 1.08) | 0.321 |
| 80-<90 ^{ref} | 1,375 | 1.00 | | |
| 90-<100 | 428 | 1.30 | (1.03 1.65) | 0.028 |
| >=100 | 83 | 2.24 | (1.46 3.44) | 0.000 |
| Hemoglobin: | | | | |
| <8 | 218 | 2.02 | (1.49 2.74) | 0.000 |
| 8-<9 | 456 | 1.64 | (1.28 2.09) | 0.000 |
| 9-<10 | 848 | 1.49 | (1.21 1.82) | 0.000 |
| 10-<11 | 910 | 0.99 | (0.81 1.22) | 0.989 |
| 11-<12 ^{ref} | 537 | 1.00 | | |
| >=12 | 308 | 0.99 | (0.76 1.31) | 0.991 |
| Serum Calcium: | | | | |
| <2.2 | 1,118 | 1.03 | (0.87 1.21) | 0.742 |
| 2.2-<2.6 ^{ref} | 2,030 | 1.00 | | |
| >=2.6 | 129 | 1.96 | (1.47 2.61) | 0.000 |
| Calcium Phosphate product: | | | | |
| <3.5 | 1,750 | 1.11 | (0.89 1.39) | 0.359 |
| 3.5-<4.5 ^{ref} | 984 | 1.00 | | |
| 4.5-<5.5 | 413 | 1.06 | (0.78 1.45) | 0.704 |
| >=5.5 | 130 | 1.06 | (0.57 1.98) | 0.856 |

Table 13.4.1: Adjusted Hazard Ratio for patient mortality (cont)

| Factors | N | Hazard Ratio | 95% CI | p value |
|---------------------|-------|--------------|-------------|---------|
| Serum Phosphate: | | | | |
| <1.6 ^{ref} | 1,903 | 1.00 | | |
| 1.6-<2.0 | 888 | 0.78 | (0.61 0.99) | 0.041 |
| 2.0-<2.2 | 233 | 1.13 | (0.75 1.71) | 0.548 |
| 2.2-<2.4 | 115 | 1.31 | (0.76 2.26) | 0.324 |
| 2.4-<2.6 | 70 | 1.11 | (0.55 2.26) | 0.764 |
| >=2.6 | 68 | 0.75 | (0.27 2.08) | 0.582 |
| KT/V | | | | |
| <=1.7 | 2,176 | 1.00 | | |
| >1.7 ^{ref} | 1,101 | 1.06 | (0.81 1.38) | 0.680 |
| Peritonitis episode | | | | |
| No ^{ref} | 2,979 | | | |
| Yes | 298 | 0.72 | (0.58 0.88) | 0.002 |
| Assisted PD | | | | |
| No ^{ref} | 1,934 | 1.00 | | |
| Yes | 1,277 | 1.58 | (1.36 1.84) | 0.000 |

Table 13.5.1 Variation in peritonitis rate (pt-month/epi) among CAPD centres, 2000- 2007

| Year | No.of centres | Min | 5 th Centile | LQ | Median | UQ | 95 th Centile | Max |
|------|---------------|------|-------------------------|------|--------|------|--------------------------|--------|
| 2000 | 12 | 11.7 | 11.7 | 18.7 | 24.1 | 32.5 | 1145.1 | 1145.1 |
| 2001 | 11 | 10.8 | 10.8 | 19.9 | 22.8 | 39.6 | 60.3 | 60.3 |
| 2002 | 14 | 12.6 | 12.6 | 20.1 | 30.5 | 42.6 | 219.2 | 219.2 |
| 2003 | 13 | 18.3 | 18.3 | 21 | 32.9 | 40.7 | 312.1 | 312.1 |
| 2004 | 15 | 0 | 0 | 23.5 | 32.7 | 36.3 | 41.5 | 41.5 |
| 2005 | 15 | 18 | 18 | 25.4 | 35.3 | 43 | 56.8 | 56.8 |
| 2006 | 21 | 14.8 | 18.5 | 26.6 | 36.8 | 49.7 | 62.2 | 97.7 |
| 2007 | 24 | 12 | 13 | 30.6 | 40.9 | 55.8 | 75.1 | 106.7 |

Figure 13.5.1 Variation in peritonitis rate among CAPD centres, 2007

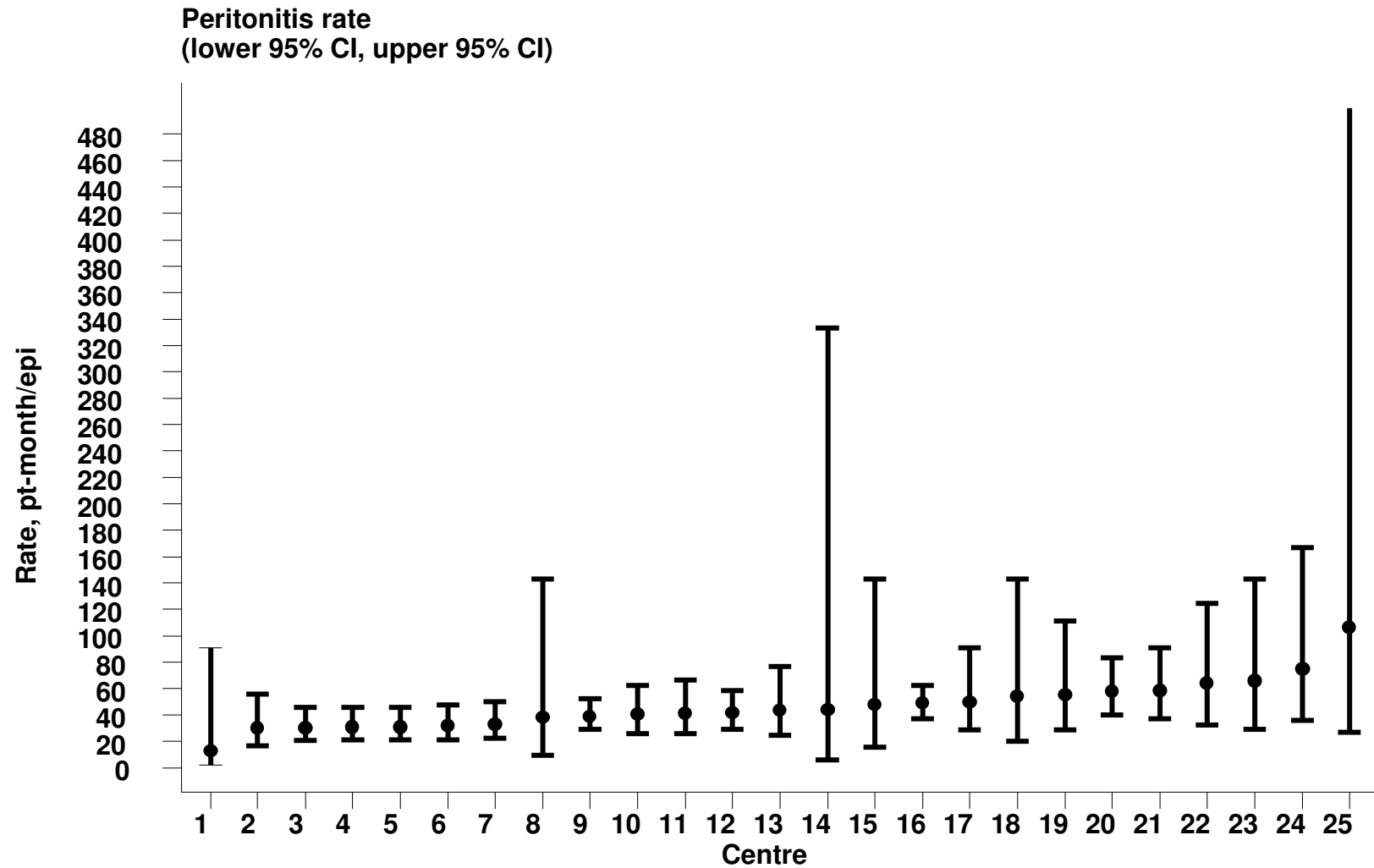


Table 13.5.2: Causative organism in PD peritonitis, 2000-2007

| Microorganism | 2000 | | 2001 | | 2002 | | 2003 | | 2004 | | 2005 | | 2006 | | 2007 | |
|---------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % | No. | % |
| (A) Gram Positives | | | | | | | | | | | | | | | | |
| •Staph. Aureus | 35 | 11 | 41 | 13 | 62 | 17 | 45 | 12 | 51 | 14 | 40 | 12 | 50 | 14 | 43 | 12 |
| •Staph Coagulase Neg. | 34 | 11 | 30 | 10 | 39 | 11 | 47 | 13 | 41 | 11 | 43 | 13 | 32 | 9 | 30 | 8 |
| •Strep | 17 | 6 | 17 | 5 | 11 | 3 | 16 | 4 | 13 | 3 | 10 | 3 | 16 | 4 | 14 | 4 |
| •Others | 4 | 1 | 6 | 2 | 7 | 2 | 15 | 4 | 4 | 1 | 8 | 2 | 13 | 4 | 10 | 3 |
| (B) Gram Negatives | | | | | | | | | | | | | | | | |
| •Pseudomonas | 19 | 6 | 14 | 4 | 23 | 6 | 20 | 5 | 28 | 8 | 27 | 8 | 23 | 6 | 30 | 8 |
| •Acinetobacter | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| •Klebsiella | 10 | 3 | 7 | 2 | 18 | 5 | 27 | 7 | 25 | 7 | 20 | 6 | 8 | 2 | 21 | 6 |
| •Enterobacter | 11 | 4 | 16 | 5 | 11 | 3 | 13 | 4 | 19 | 5 | 19 | 6 | 20 | 5 | 17 | 5 |
| •E.Coli | 15 | 5 | 16 | 5 | 23 | 6 | 20 | 5 | 23 | 6 | 30 | 9 | 15 | 4 | 32 | 9 |
| •Others | 9 | 3 | 17 | 5 | 15 | 4 | 15 | 4 | 16 | 4 | 17 | 5 | 14 | 4 | 14 | 4 |
| (C) Polymicrobial | 9 | 3 | 10 | 3 | 8 | 2 | 3 | 1 | 2 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| (D) Others | | | | | | | | | | | | | | | | |
| •Fungal | 19 | 6 | 21 | 7 | 12 | 3 | 12 | 3 | 15 | 4 | 7 | 2 | 16 | 4 | 20 | 5 |
| •Mycobacterium | 6 | 2 | 4 | 1 | 1 | 0 | 3 | 1 | 4 | 1 | 2 | 1 | 4 | 1 | 1 | 0 |
| •Others | 2 | 1 | 14 | 4 | 14 | 4 | 13 | 4 | 8 | 2 | 3 | 1 | 11 | 3 | 15 | 4 |
| (E) No growth | 119 | 39 | 99 | 32 | 118 | 33 | 115 | 32 | 123 | 33 | 96 | 30 | 142 | 39 | 124 | 33 |
| TOTAL | 309 | 100 | 312 | 100 | 362 | 100 | 364 | 100 | 372 | 100 | 322 | 100 | 365 | 100 | 371 | 100 |

Table 13.5.3: Outcome of peritonitis by Causative organism, 2000-2007

| Causative Organism | Outcome | | | | | | | |
|-----------------------|----------|----|-----------------------------------|----|-------|----|-------|-----|
| | Resolved | | Not resolved, catheter removed | | Death | | Total | |
| | No. | % | No. | % | No. | % | No. | % |
| (A) Gram Positives | | | | | | | | |
| •Staph. Aureus | 130 | 36 | 39 | 11 | 108 | 30 | 277 | 100 |
| •Staph Coagulase Neg. | 112 | 38 | 14 | 5 | 104 | 35 | 230 | 100 |
| •Strep | 39 | 34 | 6 | 5 | 47 | 41 | 92 | 100 |
| •Others | 15 | 22 | 2 | 3 | 32 | 48 | 49 | 100 |
| (B) Gram Negatives | | | | | | | | |
| •Pseudomonas | 50 | 27 | 38 | 21 | 61 | 33 | 149 | 100 |
| •Acinetobacter | 0 | | 0 | | 0 | | 0 | 100 |
| •Klebsiella | 47 | 35 | 20 | 15 | 41 | 30 | 108 | 100 |
| •Enterobacter | 35 | 28 | 23 | 18 | 45 | 36 | 103 | 100 |
| •E.Coli | 51 | 29 | 28 | 16 | 53 | 30 | 132 | 100 |
| •Others | 35 | 30 | 23 | 20 | 32 | 27 | 90 | 100 |
| (C) Polymicrobial | 3 | 9 | 0 | 0 | 22 | 65 | 25 | 100 |
| (D) Others | | | | | | | | |
| •Fungal | 2 | 2 | 49 | 40 | 32 | 26 | 83 | 100 |
| •Mycobacterium | 0 | 0 | 9 | 36 | 13 | 52 | 22 | 100 |
| •Others | 17 | 21 | 9 | 11 | 29 | 36 | 55 | 100 |
| (E) No growth | 340 | 36 | 71 | 8 | 289 | 31 | 700 | 100 |

Table 13.5.4: Factors influencing peritonitis rate, 2000 -2007

| Factors | N (no at risk) | Annualised rate Epi/pt-year | (95% CI) | |
|----------------------------|----------------|--------------------------------|----------|--------|
| Age (years): | | | | |
| • <=14 | 70 | 0.393 | (0.321 | 0.482) |
| • 15-24 | 38 | 0.453 | (0.344 | 0.596) |
| • 25-34 ^{ref} | 82 | 0.398 | (0.335 | 0.473) |
| • 35-44 | 93 | 0.436 | (0.367 | 0.518) |
| • 45-54 | 143 | 0.515 | (0.448 | 0.591) |
| • 55-64 | 121 | 0.567 | (0.486 | 0.662) |
| • >=65 | 51 | 0.668 | (0.526 | 0.849) |
| Gender: | | | | |
| • Male ^{ref} | 282 | 0.483 | (0.436 | 0.535) |
| • Female | 316 | 0.471 | (0.43 | 0.516) |
| Diabetes: | | | | |
| • No ^{ref} | 414 | 0.442 | (0.408 | 0.479) |
| • Yes | 184 | 0.598 | (0.526 | 0.681) |
| Income: | | | | |
| • RM 0-999 ^{ref} | 210 | 0.531 | (0.475 | 0.593) |
| • RM 1000-1999 | 181 | 0.437 | (0.386 | 0.496) |
| • RM 2000-2999 | 83 | 0.4 | (0.332 | 0.482) |
| • >=3000 | 45 | 0.585 | (0.457 | 0.749) |
| Education: | | | | |
| • Nil | 50 | 0.513 | (0.404 | 0.652) |
| • Primary | 214 | 0.544 | (0.487 | 0.607) |
| • Secondary ^{ref} | 267 | 0.404 | (0.363 | 0.448) |
| • Tertiary | 38 | 0.537 | (0.42 | 0.686) |

Table 13.5.4: Factors influencing peritonitis rate, 2000 -2007 (cont)

| Factors | N (no at risk) | Annualised rate Epi/pt-year | (95% CI) | |
|------------------------------------|----------------|--------------------------------|----------|--------|
| Assistance to perform CAPD: | | | | |
| •Self care ^{ref} | 415 | 0.449 | (0.415 | 0.487) |
| •Partially assisted | 72 | 0.553 | (0.456 | 0.672) |
| •Completely assisted | 99 | 0.578 | (0.483 | 0.693) |
| Year vintage | | | | |
| •1 to \leq 2 ^{ref} | 128 | 1.387 | (1.19 | 1.617) |
| •>2 to \leq 4 | 161 | 0.816 | (0.707 | 0.941) |
| •> 4 | 309 | 0.344 | (0.315 | 0.376) |