

Chapter 3

Death and Survival on Dialysis

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Table 3.1.1: Deaths on Dialysis 2001-2010

Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Number of dialysis patients at risk	7270	8470	9751	11114	12581	14189	16034	18136	20248	22089
Dialysis deaths	850	959	1211	1318	1513	1815	1984	2190	2578	2574
Dialysis death rate %	12	11	12	12	12	13	12	12	13	12
Number of HD patients at risk	6549	7619	8757	10021	11435	12948	14605	16492	18440	20176
HD deaths	711	831	1016	1162	1331	1638	1754	1913	2258	2257
HD death rate %	11	11	12	12	12	13	12	12	12	11
Number of PD patients at risk	721	851	994	1093	1146	1242	1429	1645	1808	1913
PD deaths	139	128	195	156	182	177	230	277	320	317
PD death rate %	19	15	20	14	16	14	16	17	18	17

Figure 3.1.1: Death Rates on Dialysis 2001-2010

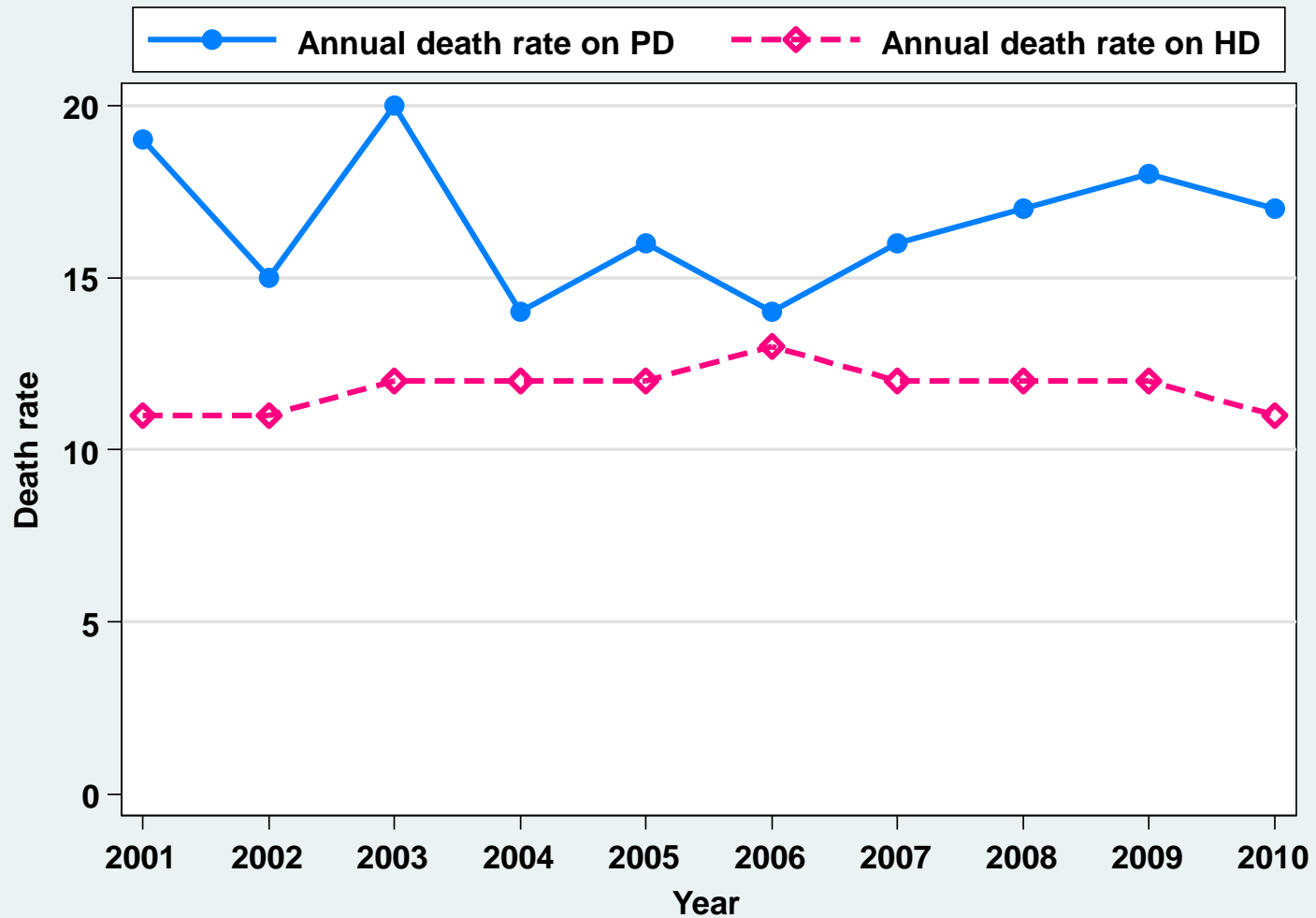


Table 3.1.2: Causes of Death on Dialysis 2001-2010

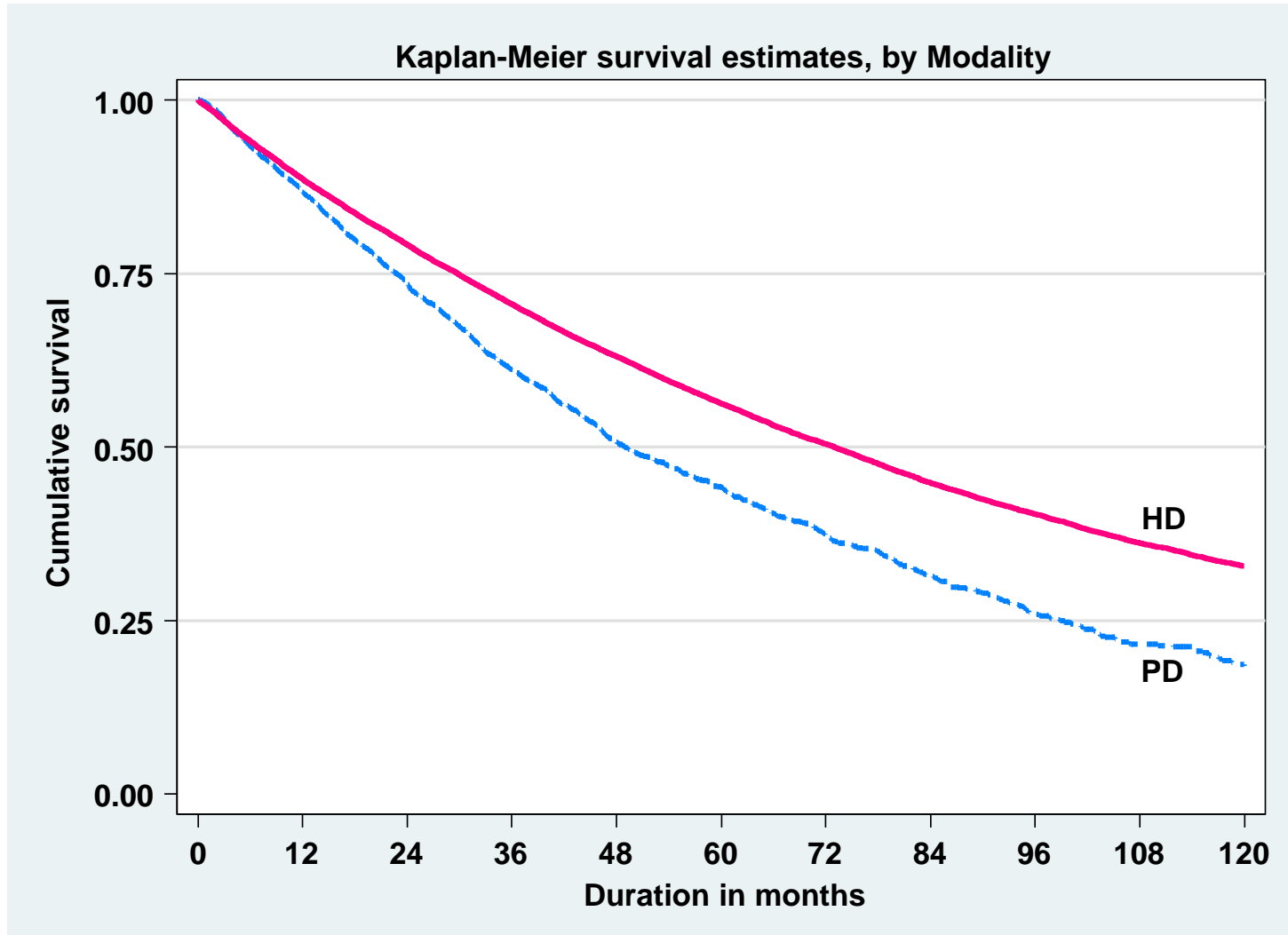
Year Causes of Death	2001		2002		2003		2004		2005	
	n	%	n	%	n	%	n	%	n	%
Cardiovascular	221	26	313	33	341	28	341	26	376	25
Died at home	228	27	212	22	290	24	307	23	320	21
Sepsis	134	16	148	15	197	16	166	13	179	12
PD peritonitis	30	4	16	2	14	1	13	1	22	1
GIT bleed	18	2	24	3	29	2	24	2	29	2
Cancer	18	2	18	2	28	2	20	2	28	2
Liver disease	11	1	16	2	25	2	29	2	26	2
Withdrawal	20	2	18	2	26	2	9	1	11	1
Others	89	10	104	11	161	13	325	25	406	27
Unknown	81	10	90	9	100	8	84	6	116	8
TOTAL	850	100	959	100	1211	100	1318	100	1513	100

Year Causes of Death	2006		2007		2008		2009		2010	
	n	%	n	%	n	%	n	%	n	%
Cardiovascular	517	28	516	26	682	31	871	34	871	34
Died at home	354	20	343	17	423	19	492	19	507	20
Sepsis	235	13	222	11	336	15	570	22	605	24
PD peritonitis	22	1	16	1	25	1	30	1	34	1
GIT bleed	26	1	31	2	43	2	44	2	51	2
Cancer	41	2	34	2	53	2	54	2	69	3
Liver disease	35	2	37	2	44	2	26	1	31	1
Withdrawal	23	1	27	1	24	1	34	1	29	1
Others	392	22	552	28	366	17	195	8	108	4
Unknown	170	9	206	10	194	9	262	10	269	10
TOTAL	1815	100	1984	100	2190	100	2578	100	2574	100

**Table 3.2.1(a): Patient survival by dialysis modality analysis
(censored for change of modality)**

Dialysis Modality Interval (month)	PD			HD			All		
	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	5705	100		39368	100		45073	100	
6	4899	93	0	34744	94	0	39643	94	0
12	4090	87	0	30262	89	0	34352	88	0
24	2760	74	1	23279	79	0	26039	79	0
36	1812	61	1	17929	71	0	19741	70	0
48	1172	51	1	13649	63	0	14821	62	0
60	802	44	1	10337	56	0	11139	55	0
72	542	37	1	7932	50	0	8473	49	0
84	342	31	1	5989	45	0	6330	43	0
96	202	26	1	4588	40	0	4787	39	0
108	126	22	1	3456	36	0	3581	35	0
120	73	18	1	2632	33	0	2705	32	0

Figure 3.2.1(a): Patient survival by dialysis modality analysis (censored for change of modality)



**Table 3.2.1(b): Patient survival by dialysis modality analysis
(not censored for change of modality)**

Dialysis modality Interval (month)	PD			HD			All		
	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	5705	100		39368	100		45073	100	
6	5083	93	0	35268	94	0	40351	94	0
12	4470	87	0	31171	89	0	35641	88	0
24	3370	74	1	24544	79	0	27902	79	0
36	2520	63	1	19261	71	0	21781	70	0
48	1883	54	1	14964	64	0	16847	62	0
60	1504	48	1	11616	57	0	13120	56	0
72	1209	43	1	9122	52	0	10330	50	0
84	965	38	1	7085	46	0	8049	45	0
96	751	34	1	5579	42	0	6328	41	0
108	565	31	1	4340	38	0	4904	37	0
120	429	28	1	3426	35	0	3855	34	0

**Figure 3.2.1(b): Patient survival by dialysis modality analysis
(not censored for change of modality)**

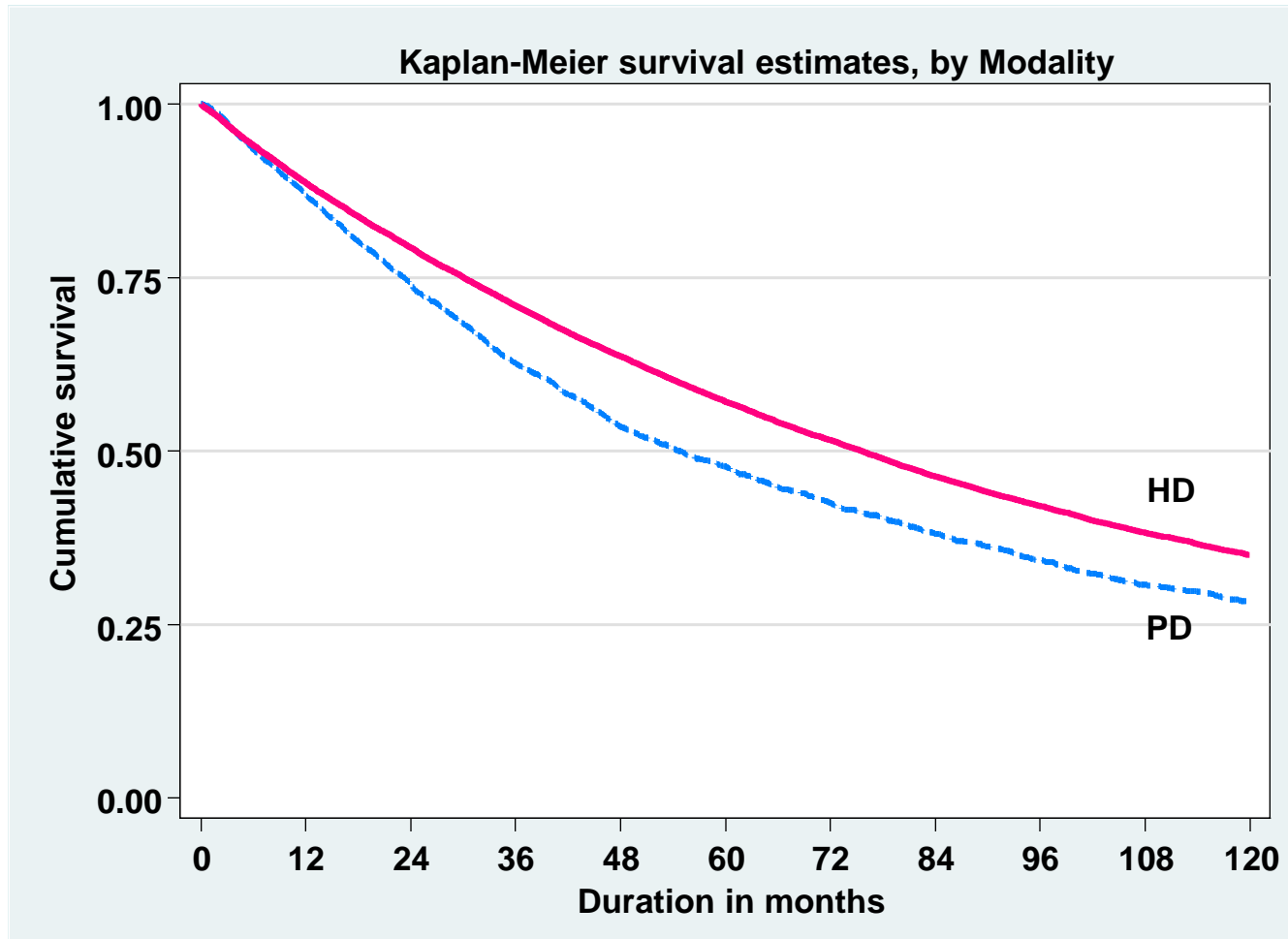


Table 3.2.2: Unadjusted patient survival by year of entry, 2001-2010

Year Interval (month)	2001			2002			2003			2004		
	n	% survival	SE	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	2238	100		2522	100		2759	100		3086	100	
6	2073	94	1	2359	95	0	2542	94	0	2874	94	0
12	1892	89	1	2179	89	1	2337	88	1	2642	88	1
24	1601	78	1	1841	79	1	2009	78	1	2286	79	1
36	1383	69	1	1595	70	1	1716	68	1	1955	69	1
48	1193	61	1	1383	61	1	1489	60	1	1693	60	1
60	1023	54	1	1195	54	1	1292	53	1	1465	53	1
72	895	47	1	1037	48	1	1119	47	1	1273	47	1
84	781	42	1	882	42	1	945	40	1	2	-	-
96	679	37	1	783	38	1	8	-	-	-	-	-
108	595	33	1	2	-	-	-	-	-	-	-	-
120	1	-	-	-	-	-	-	-	-	-	-	-

Year Interval (month)	2005			2006			2007			2008		
	n	% survival	SE	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	3316	100		3875	100		4259	100		4803	100	
6	3047	93	0	3558	93	0	3958	94	0	4451	94	0
12	2796	87	1	3279	87	1	3654	88	1	4106	88	0
24	2399	77	1	2829	77	1	3153	78	1	3495	77	1
36	2077	68	1	2454	68	1	2723	69	1	106	-	-
48	1783	59	1	2162	61	1	43	-	-	-	-	-
60	1548	53	1	42	-	-	-	-	-	-	-	-
72	17	-	-	-	-	-	-	-	-	-	-	-

Year Interval (month)	2009			2010		
	n	% survival	SE	n	% survival	SE
0	5042	100		4840	100	
6	4667	94	0	2532	93	0
12	4301	88	0	86	-	-
24	104	-	-	-	-	-

Figure 3.2.2: Unadjusted patient survival by year of entry, 2001-2010

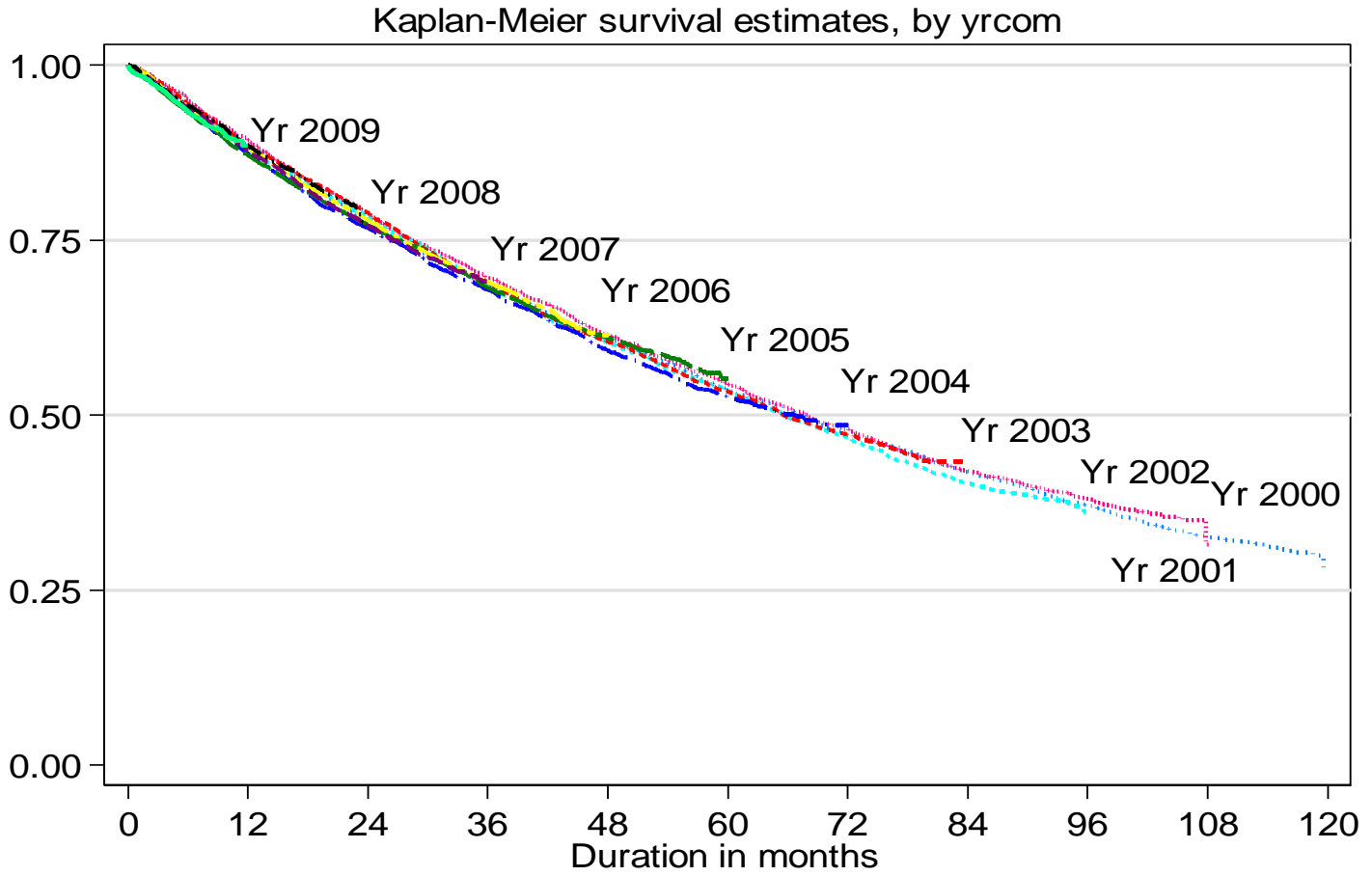


Table 3.2.3: Unadjusted patient survival by age, 2001-2010

Age group (years) Interval (month)	<15			15-24			25-34			35-44		
	n	% survival	SE	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	434	100	-	1417	100	-	2522	100	-	4318	100	-
6	396	97	1	1271	97	0	2237	97	0	3847	96	0
12	340	95	1	1117	95	1	1924	94	0	3341	92	0
24	247	89	2	828	90	1	1479	91	1	2577	86	1
36	163	87	2	647	86	1	1148	87	1	1962	81	1
48	114	82	2	489	83	1	870	84	1	1498	76	1
60	74	79	3	359	82	1	634	80	1	1089	71	1
72	51	75	4	263	79	2	467	76	1	801	67	1
84	27	69	4	169	75	2	317	72	1	511	62	1
96	17	65	6	101	75	2	184	69	2	327	59	1
108	7	65	6	47	71	3	69	66	2	147	55	2
120	1	-	-	1	-	-	1	-	-	2	-	-

Age group (years) Interval (month)	45-54			55-64			≥65		
	n	% survival	SE	n	% survival	SE	n	% survival	SE
0	8995	100	-	10442	100	-	8612	100	-
6	7992	95	0	9063	94	0	7251	90	0
12	6845	90	0	7664	87	0	5957	82	0
24	5086	81	0	5424	76	0	3967	67	1
36	3731	73	1	3781	65	1	2577	54	1
48	2653	65	1	2536	56	1	1572	43	1
60	1798	59	1	1629	48	1	942	34	1
72	1184	52	1	1006	40	1	559	27	1
84	733	46	1	564	34	1	294	21	1
96	429	42	1	281	29	1	125	15	1
108	180	37	1	106	24	1	43	12	1
120	1	-	-	1	-	-	1	-	-

Figure 3.2.3: Unadjusted patient survival by age, 2001-2010

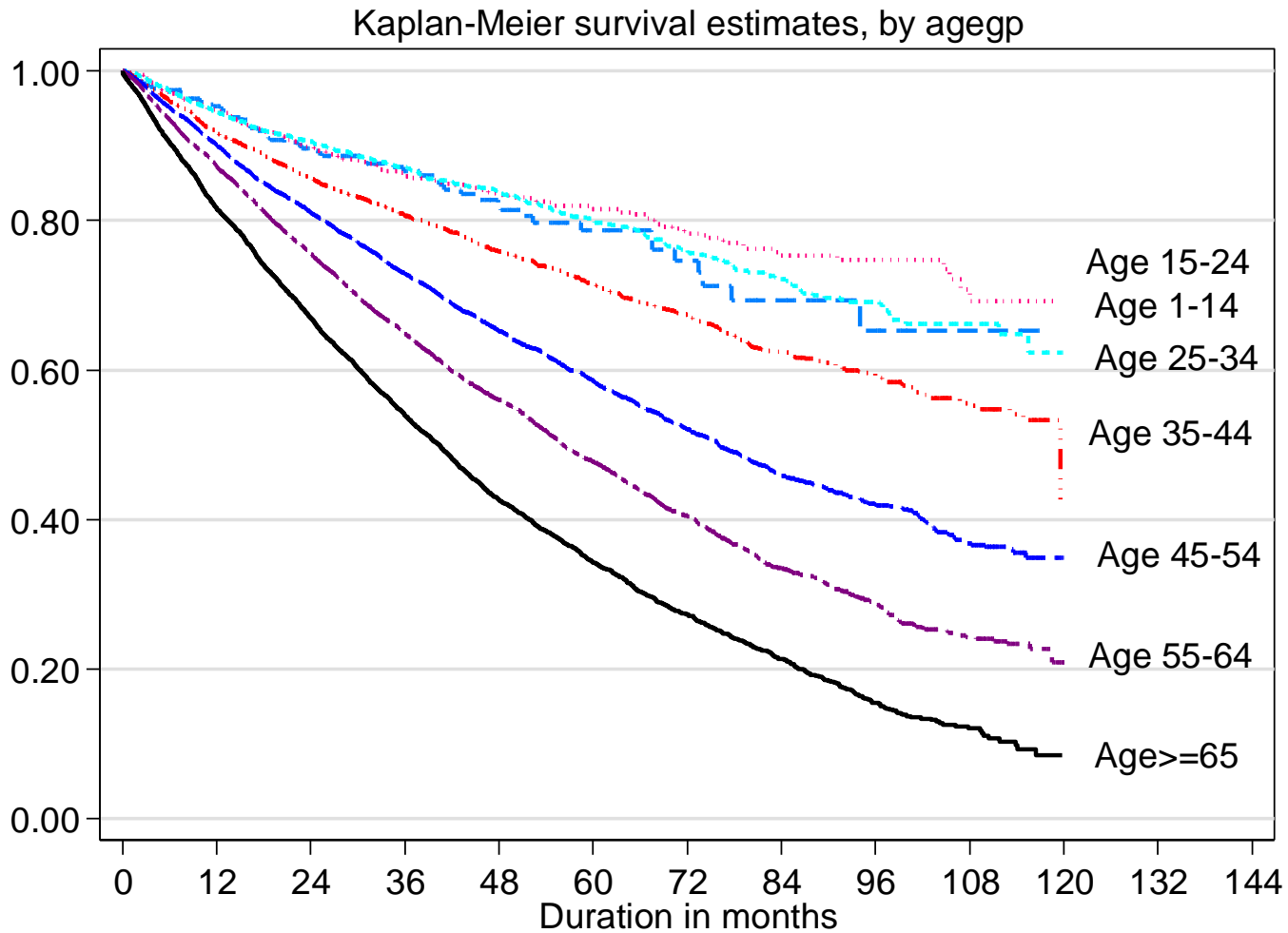


Table 3.2.4: Unadjusted patient survival by Diabetes status, 2001-2010

Diabetes status Interval (month)	Non-diabetic			Diabetic		
	n	% survival	SE	n	% survival	SE
0	16218	100		20522	100	
6	14230	95	0	17823	93	0
12	12282	91	0	14903	86	0
24	9310	84	0	10297	73	0
36	7068	78	0	6940	61	0
48	5214	73	0	4485	51	0
60	3785	68	0	2737	43	0
72	2684	62	1	1638	36	1
84	1710	57	1	901	29	1
96	1013	53	1	449	24	1
108	445	49	1	150	20	1
120	1	-	-	1	-	-

Figure 3.2.4: Unadjusted patient survival by Diabetes status, 2001-2010

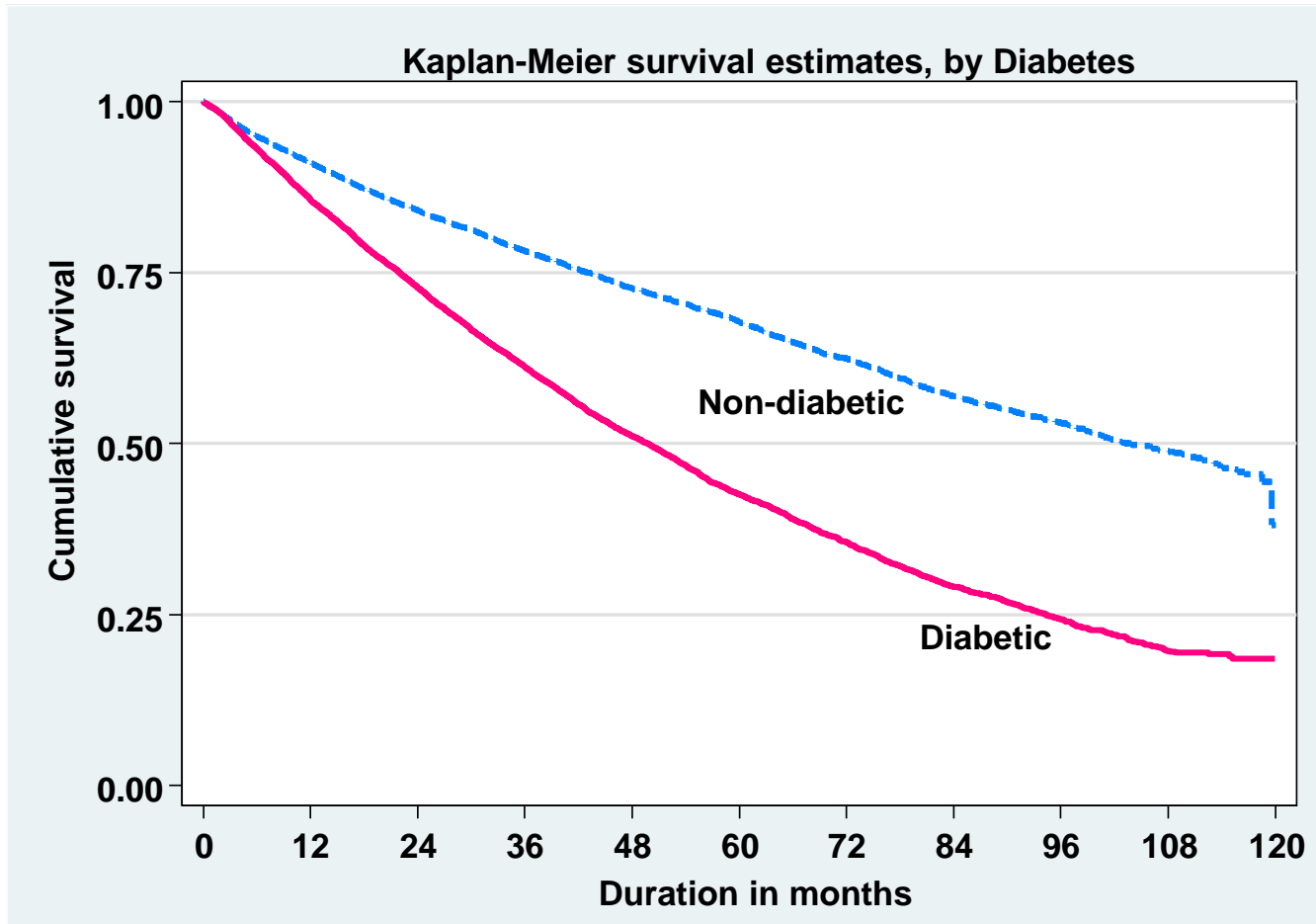
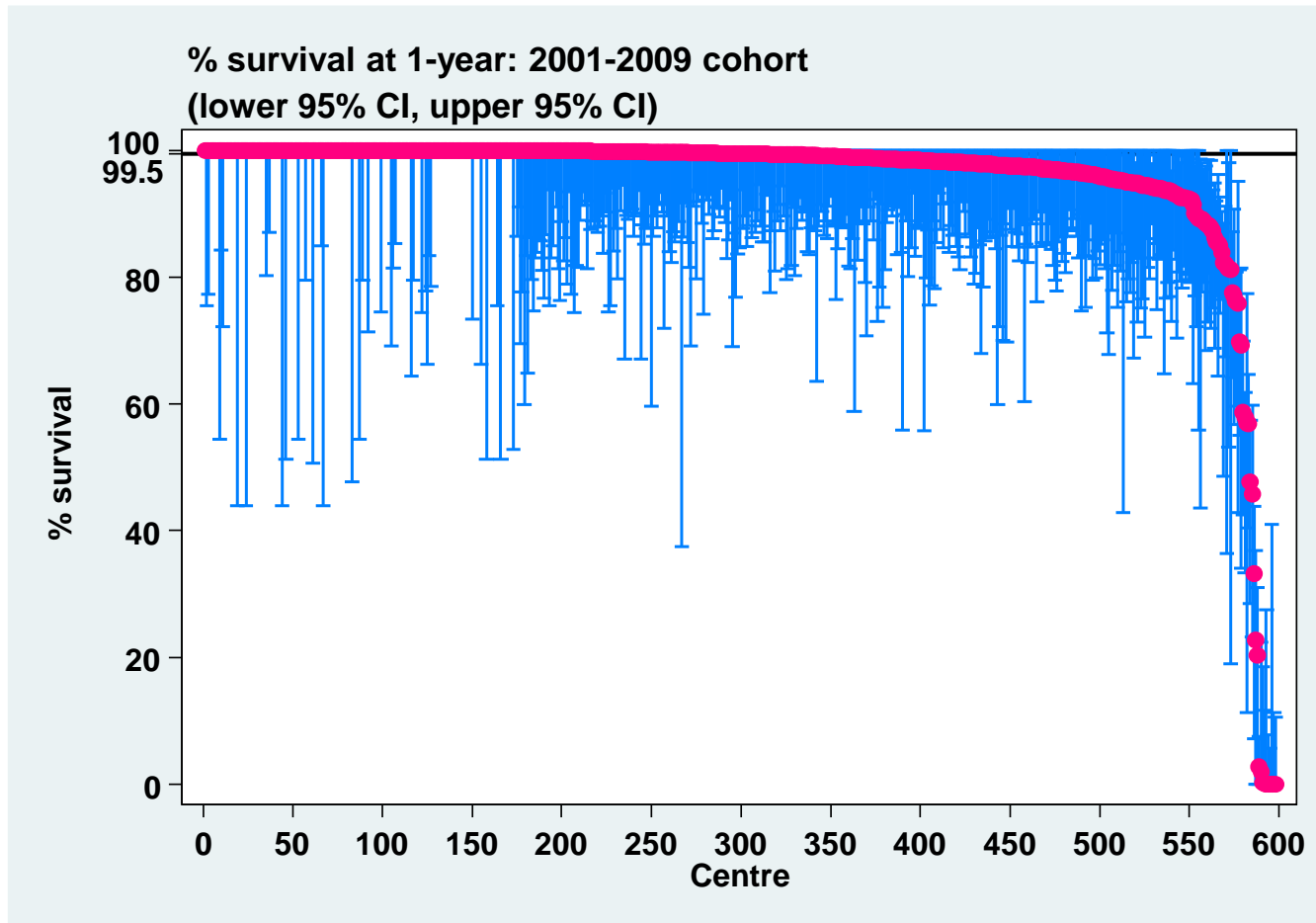


Figure 3.3.1 (a): Variation in patient survival at 1 year among HD centres adjusted for age and diabetes, 2001-2009



*Horizontal line represents the median % survival among HD centres

Figure 3.3.1 (b): Funnel plot for patient survival at 1 year among HD centres adjusted age and diabetes, 2001-2009 cohort

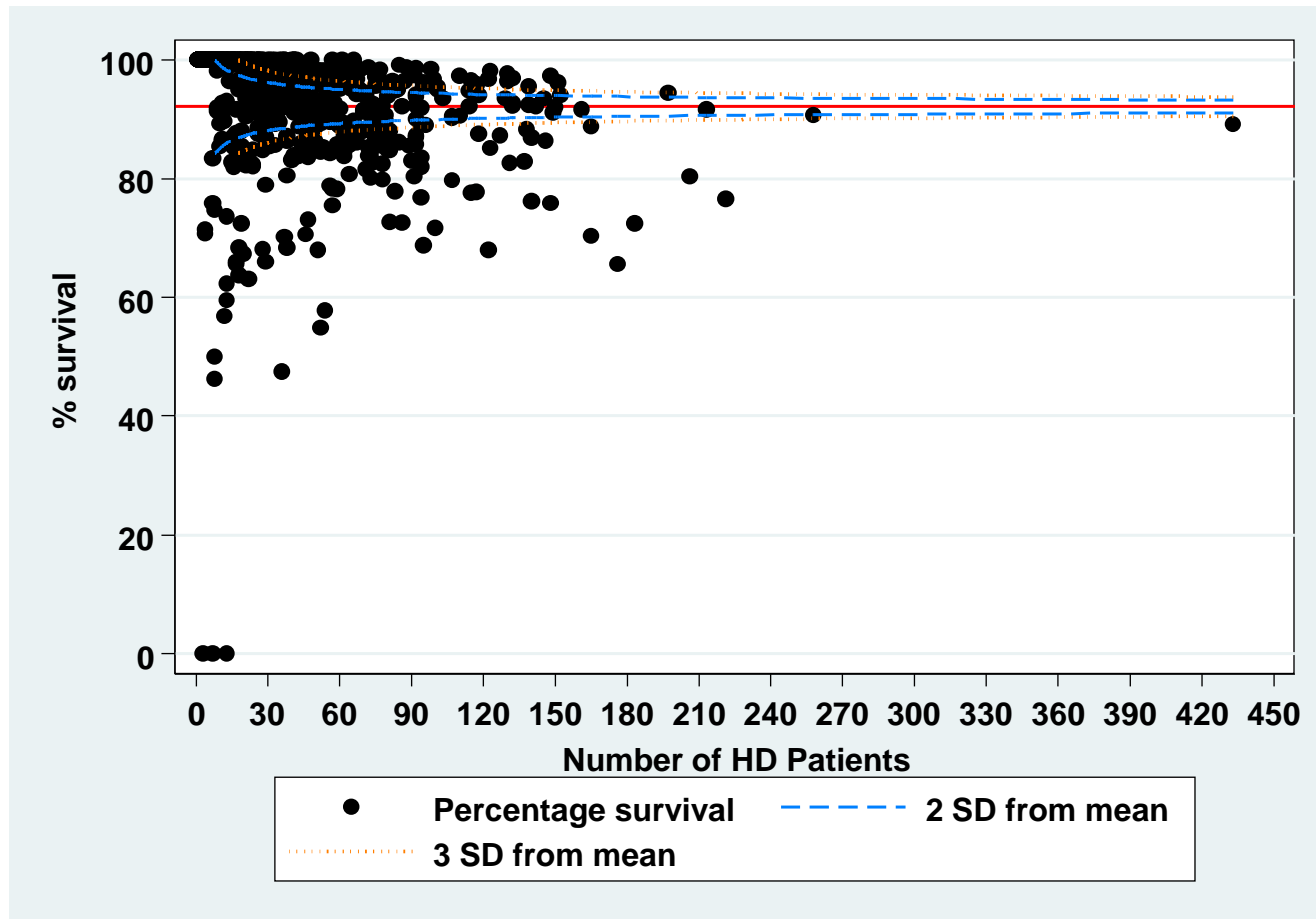
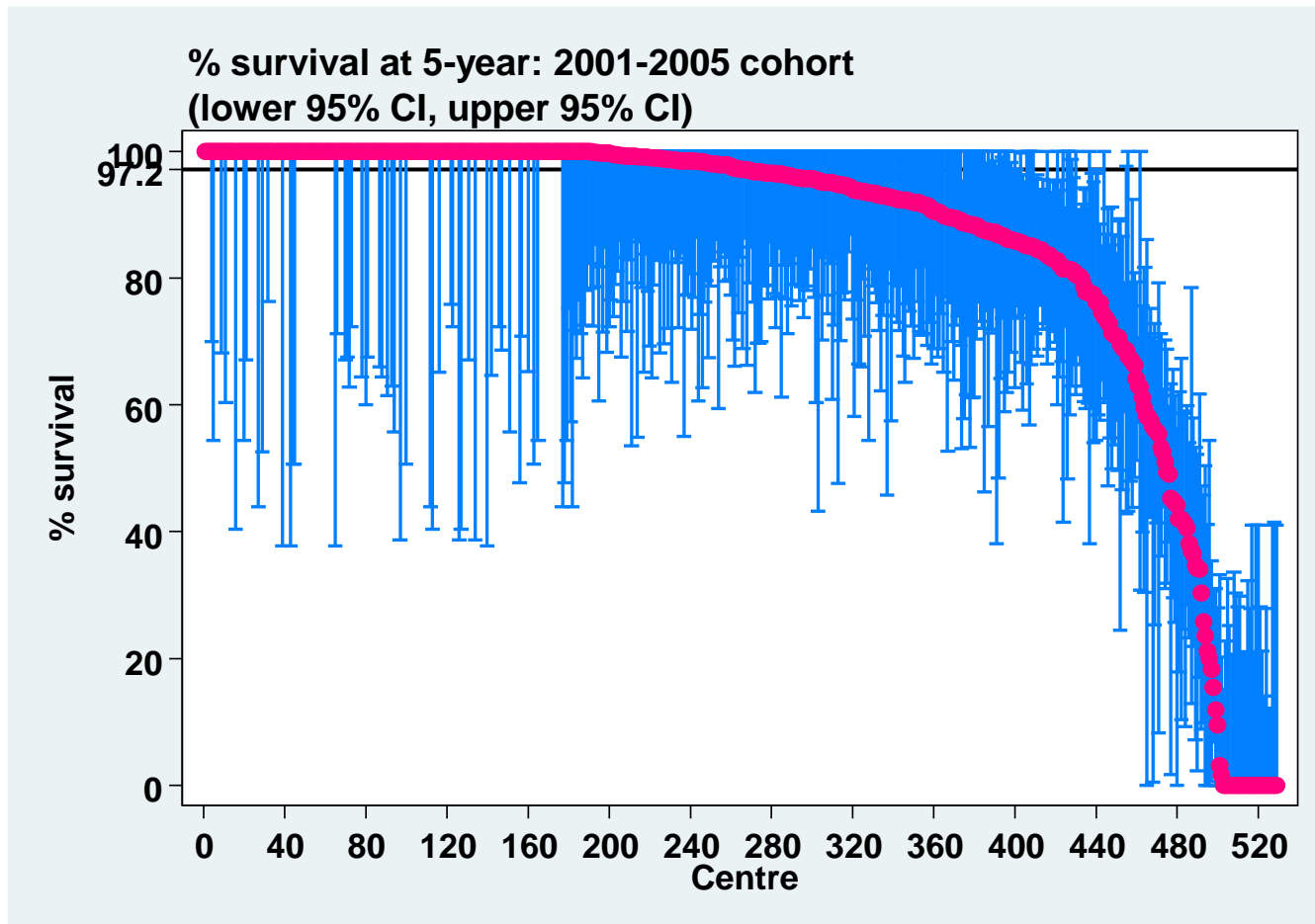


Figure 3.3.1 (c): Variation in patient survival at 5-years among HD centres adjusted for age and diabetes, 2001-2005



*Horizontal line represents the median % survival among HD centres

Figure 3.3.1 (d): Funnel plot for patient survival at 5 years among PD centres adjusted for age and diabetes, 2001-2005 cohort

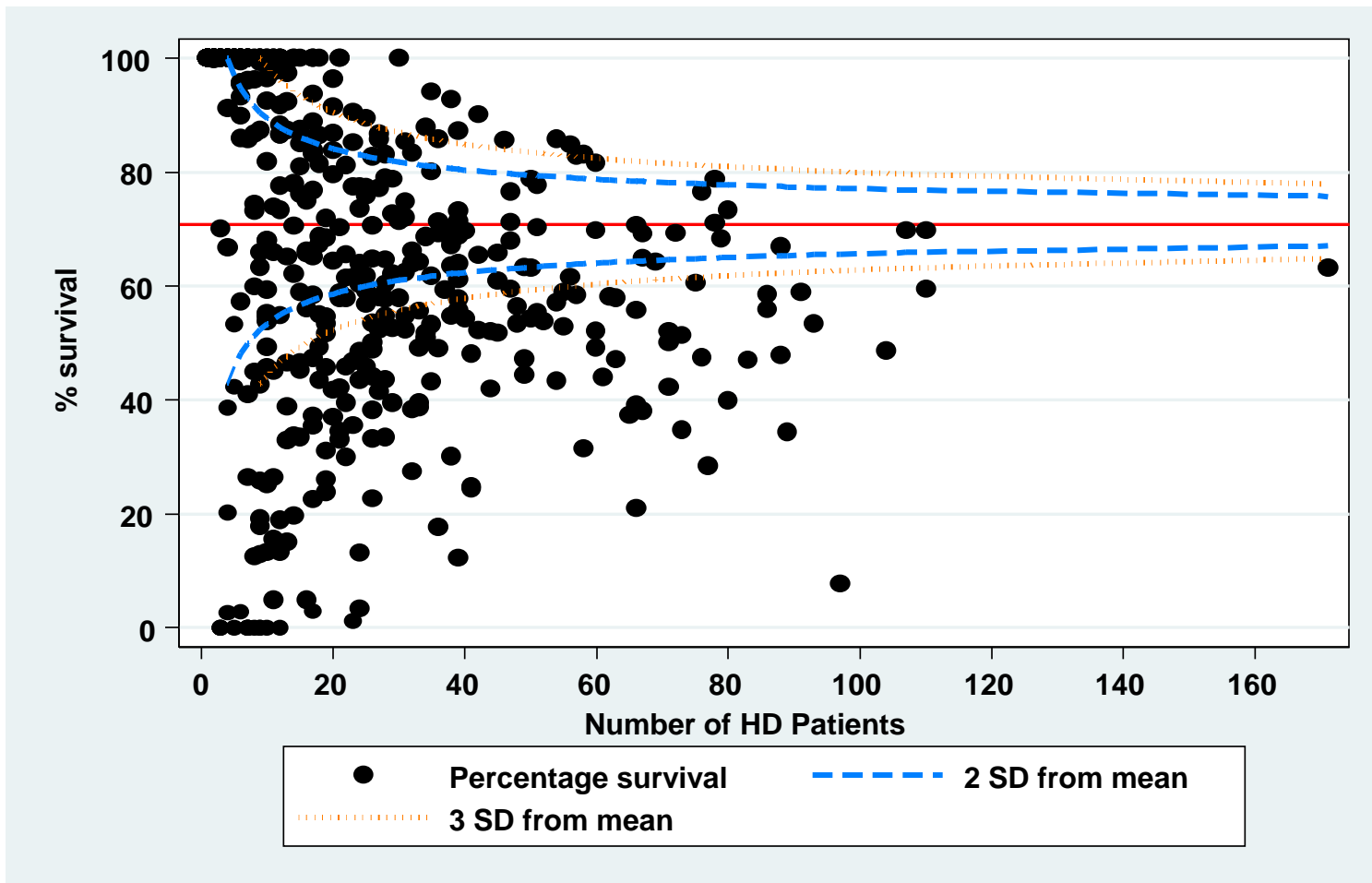
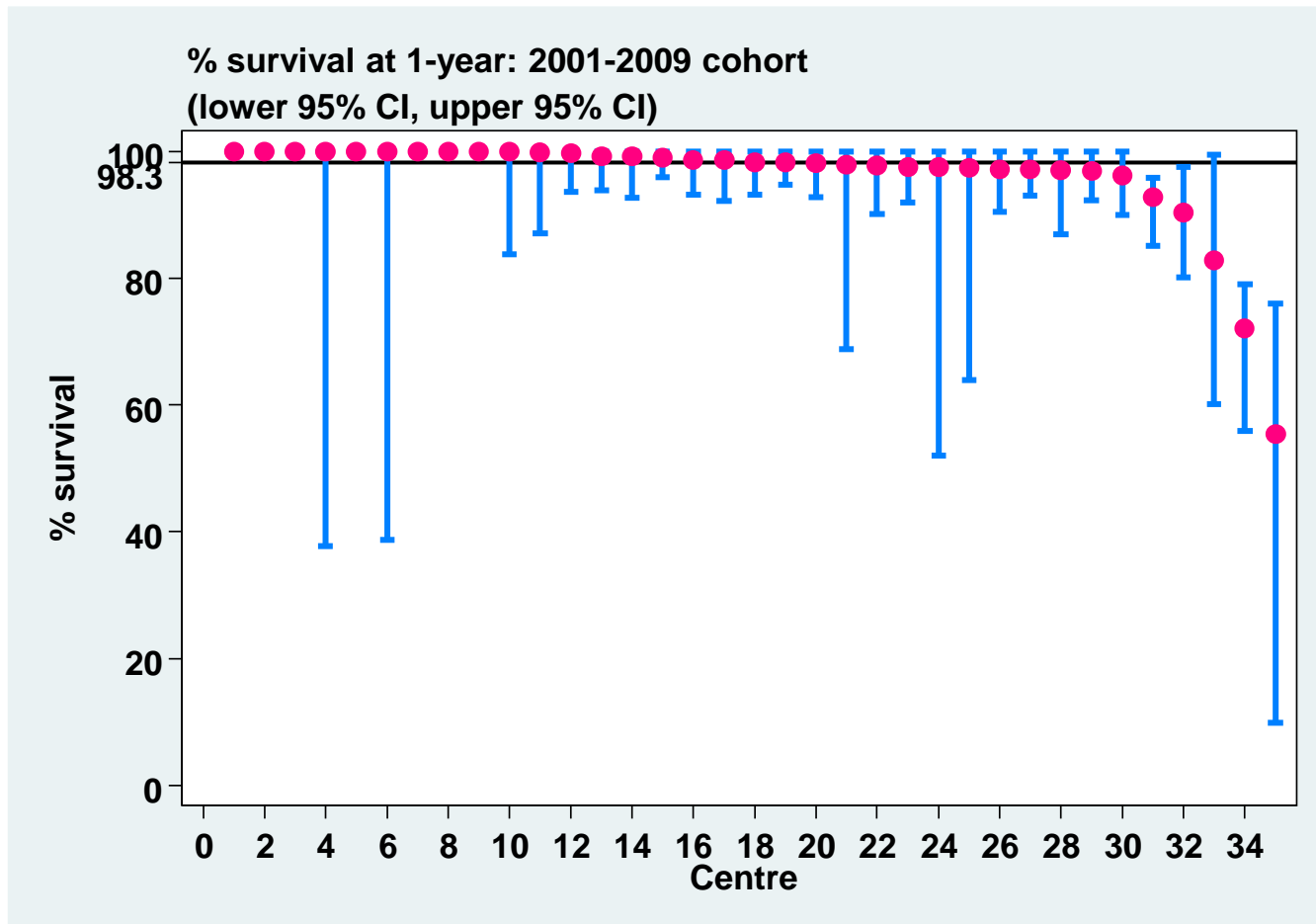


Figure 3.3.2 (a): Variation in patient survival at 1 year among PD centres adjusted for age and diabetes, 2001-2009



*Horizontal line represents the median % survival among PD centres

Figure 3.3.2 (b): Funnel plot of 1-year patient survival from the 90th day of dialysis adjusted for age and diabetes among PD centres, 2001-2009 cohort

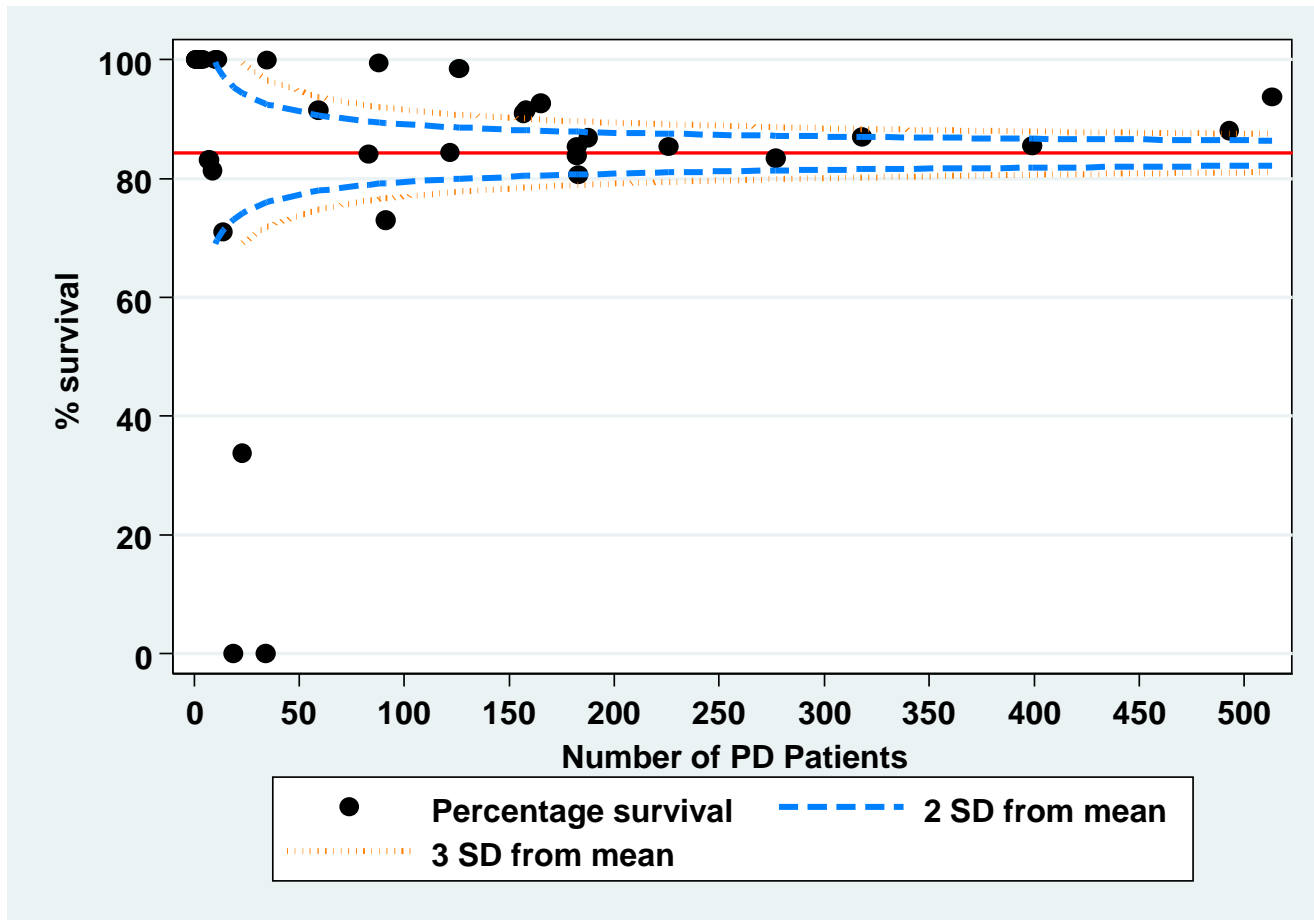
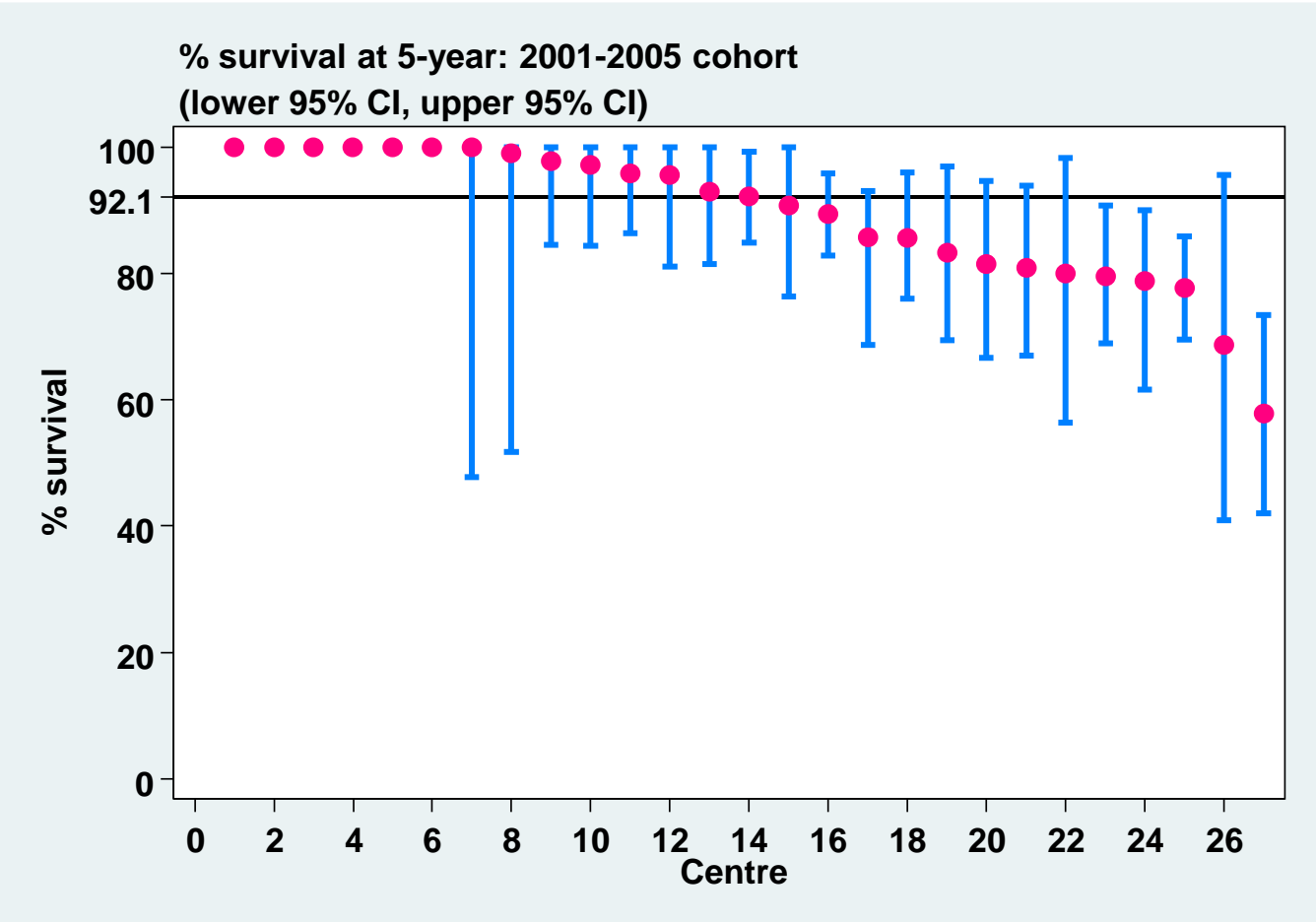


Figure 3.3.2 (c): Variation in patient survival at 5-years among PD centres adjusted for age and diabetes, 2001-2005



*Horizontal line represents the median % survival among HD centres

Figure 3.3.2 (d): Funnel plot for 5-year patient survival from 90 days of dialysis adjusted for age and diabetes among PD centres, 2001-2005 cohort

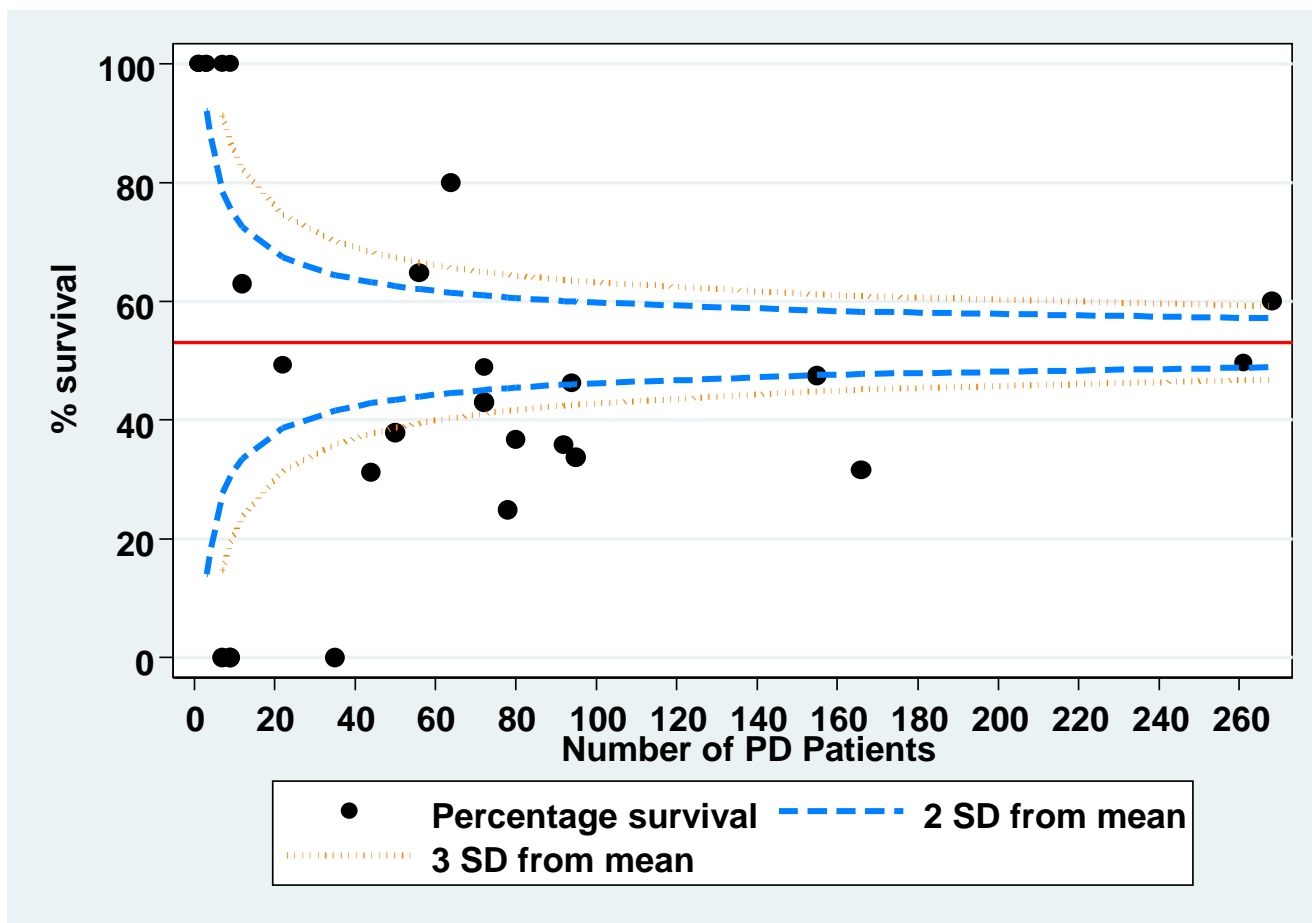


Table 3.4.1: Adjusted hazard ratio for mortality of dialysis patients uncensored for change of modality (2001-2010)

Factors	N	Hazard Ratio	95% CI	P-value
Age (years):				
• Age 1-14 (ref [†])	375	1.00		
• Age 15-24	1197	1.30	(0.96; 1.76)	0.093
• Age 25-34	2241	1.50	(1.12; 2.01)	0.006
• Age 35-44	3969	2.05	(1.55; 2.72)	<0.001
• Age 45-54	8512	2.88	(2.18; 3.81)	<0.001
• Age 55-64	9985	3.68	(2.78; 4.86)	<0.001
• Age ≥65	8319	5.16	(3.9; 6.83)	<0.001
Gender:				
• Male (ref [†])	19277	1.00		
• Female	15322	0.82	(0.79; 0.85)	<0.001
Primary diagnosis:				
• Unknown primary	9248	1.30	(1.16; 1.47)	<0.001
• Diabetes mellitus	19050	1.87	(1.66; 2.1)	<0.001
• GN/SLE (ref [†])	1740	1.00		
• Polycystic kidney	366	1.15	(0.9; 1.45)	0.263
• Obstructive nephropathy	866	1.26	(1.07; 1.49)	0.006
• Others	3329	1.17	(1.03; 1.34)	0.018
Year start dialysis:				
• 2001-2002 (ref [†])	4439	1.00		
• 2003-2004	5501	1.04	(0.99; 1.1)	0.142
• 2005-2006	3134	1.08	(1.01; 1.15)	0.028
• 2007-2008	8595	1.05	(0.99; 1.11)	0.126
• 2009-2010	9261	0.93	(0.86; 1.01)	0.086
Modality:				
• HD (ref [†])	30500	1.00		
• PD	4099	1.10	(1.03; 1.18)	0.006
BMI:				
• BMI<18.5	2602	1.26	(1.16; 1.37)	<0.001
• BMI 18.5-25	21890	1.15	(1.1; 1.21)	<0.001
• ≥25 (ref [†])	10107	1.00		
Serum albumin (g/L):				
• <30	2254	3.86	(3.54; 4.21)	<0.001
• 30-<35	4838	2.24	(2.09; 2.39)	<0.001
• 35-<40	16464	1.79	(1.7; 1.88)	<0.001
• ≥40 (ref [†])	11043	1.00		
Serum cholesterol (mmol/L):				
• <3.2	1545	1.11	(1.01; 1.23)	0.029
• 3.2-<5.2	25175	1.17	(1.11; 1.23)	<0.001
• ≥5.2 (ref [†])	7879	1.00		

Factors	N	Hazard Ratio	95% CI	P-value
Diastolic BP (mmHg):				
• <70	5201	0.88	(0.83; 0.94)	<0.001
• 70-<80	13832	1.11	(1.06; 1.16)	<0.001
• 80-<90 (ref [†])	11524	1.00		
• 90-<100	3224	1.03	(0.95; 1.12)	0.447
• ≥100	818	1.38	(1.19; 1.59)	<0.001
Hemoglobin:				
• <8	2655	3.60	(3.3; 3.92)	<0.001
• 8-<9	4544	2.42	(2.24; 2.62)	<0.001
• 9-<10	10785	2.30	(2.15; 2.47)	<0.001
• 10-<11	7628	1.53	(1.42; 1.64)	<0.001
• 11-<12 (ref [†])	4898	1.00		
• ≥12	2089	1.02	(0.92; 1.14)	0.667
Serum calcium (mmol/L):				
• <2.2	14283	1.04	(1; 1.09)	0.075
• 2.2-<2.6 (ref [†])	19770	1.00		
• ≥2.6	546	1.72	(1.5; 1.96)	<0.001
Calcium Phosphate product (mmol²/L²):				
• <3.5	12421	0.85	(0.79; 0.91)	<0.001
• 3.5-<4.5 (ref [†])	15076	1.00		
• 4.5-<5.5	5030	0.73	(0.67; 0.8)	0.000
• ≥5.5	2072	0.77	(0.66; 0.91)	0.002
Serum Phosphate (mmol/L):				
• <1.6	12937	0.98	(0.91; 1.05)	0.515
• 1.6-<2.0 (ref [†])	14309	1.00		
• 2.0-<2.2	3215	0.88	(0.8; 0.96)	0.004
• 2.2-<2.4	1897	0.95	(0.84; 1.07)	0.395
• 2.4-<2.6	1059	1.08	(0.92; 1.27)	0.322
• ≥2.6	1182	1.32	(1.1; 1.59)	0.003
HBsAg:				
• Negative (ref [†])	33386	1.00		
• Positive	1213	1.02	(0.93; 1.12)	0.688
Anti-HCV:				
• Negative (ref [†])	33755	1.00		
• Positive	844	1.02	(0.91; 1.13)	0.782
Cardiovascular disease (CVD):				
• No CVD (ref [†])	28865	1.00		
• CVD	5734	1.33	(1.27; 1.39)	<0.001

Figure 3.4.1 (a): Adjusted hazard ratio for mortality of dialysis patients uncensored for change of modality by diastolic blood pressure (2001-2010 cohort)

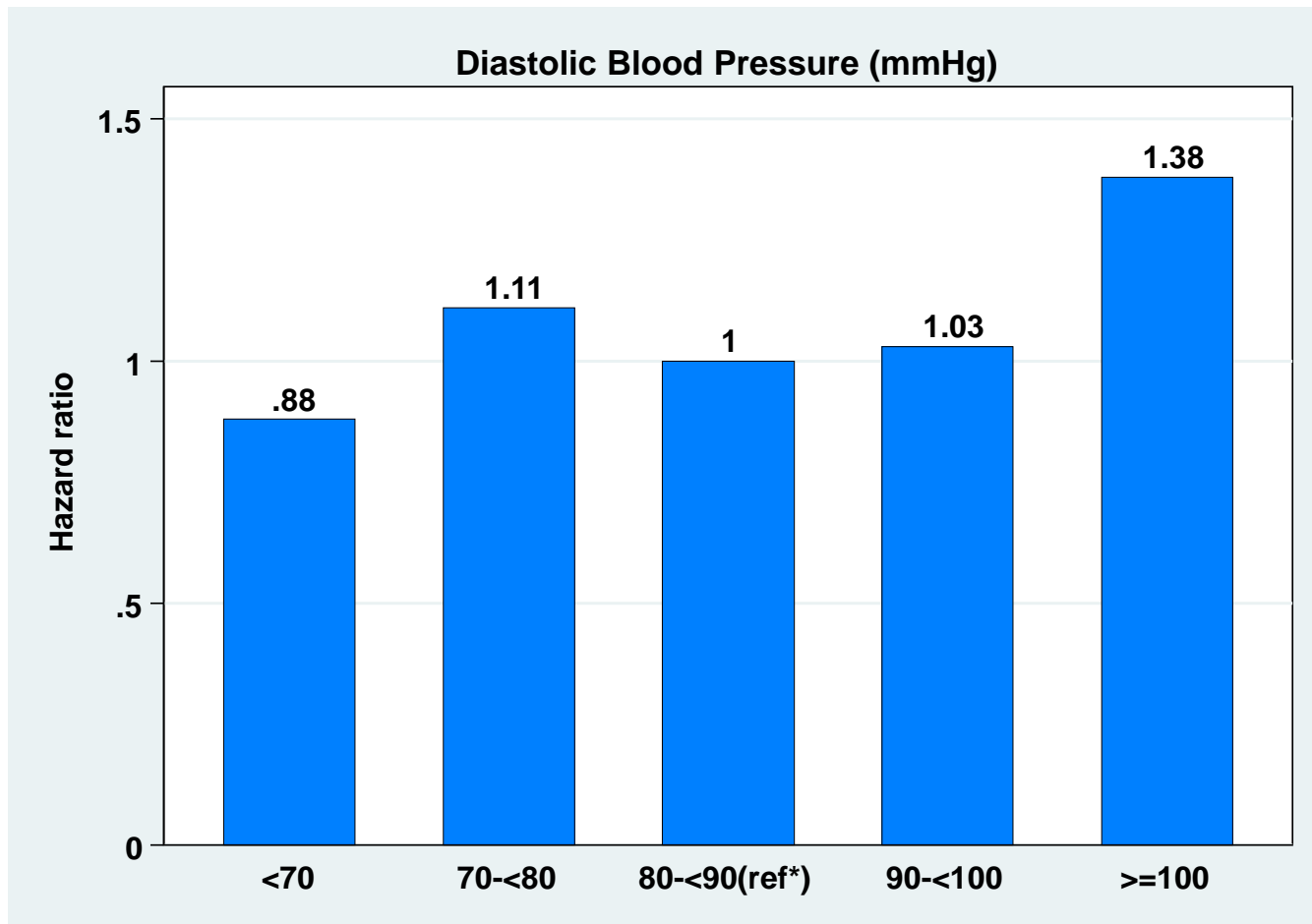


Figure 3.4.1 (b): Adjusted hazard ratio for mortality of dialysis patients uncensored for change of modality by serum phosphate (2001-2010 cohort)

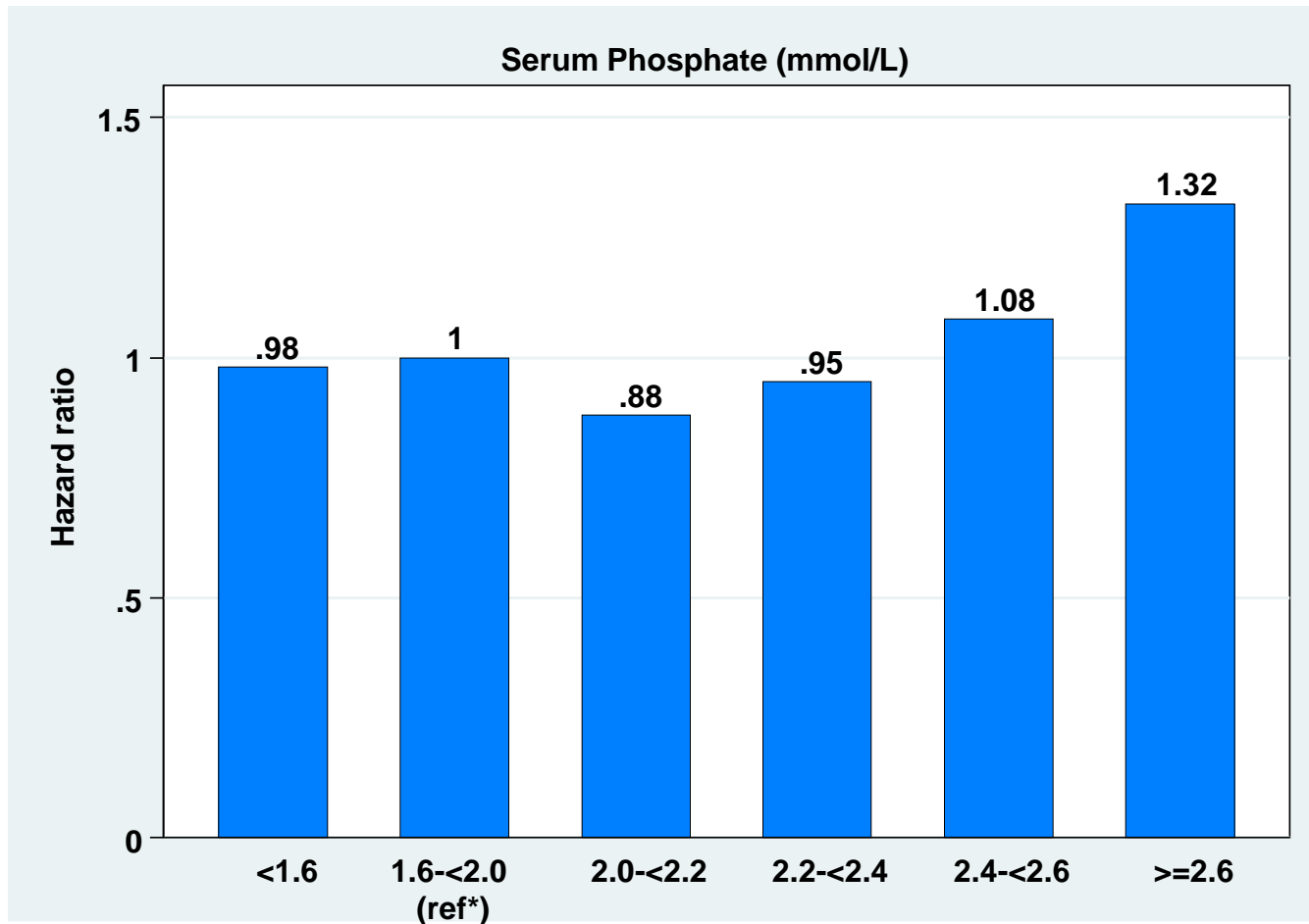


Figure 3.4.1 (c): Adjusted hazard ratio for mortality of dialysis patients uncensored for change of modality by hemoglobin (2001-2010 cohort)

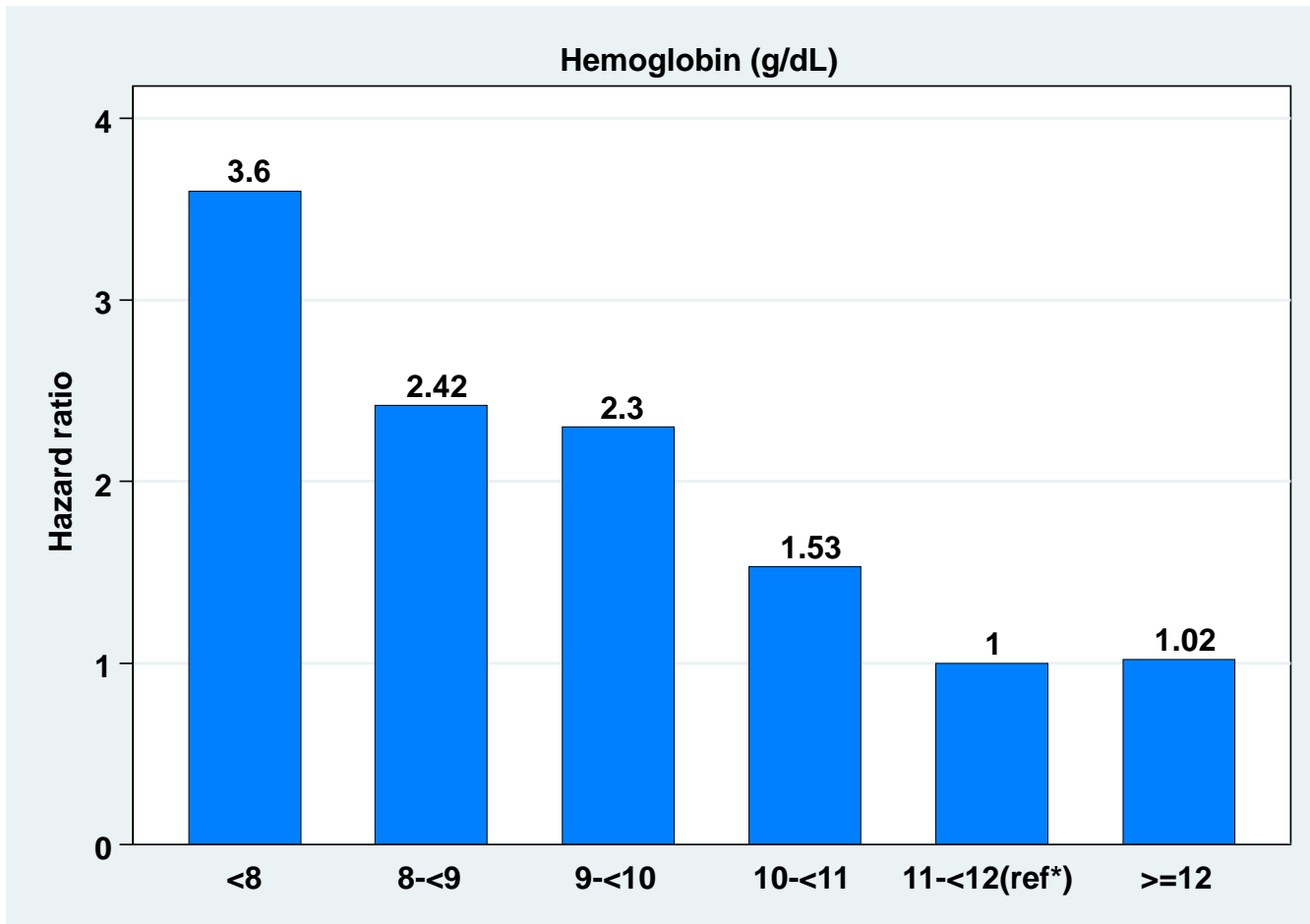


Table 3.4.2: Adjusted hazard ratio for mortality of HD patients uncensored for change of modality (2001-2010 cohort)

Factors	N	Hazard Ratio	95% CI	P-value
Age (years):				
• Age 1-14 (ref)	72	1.00		
• Age 15-24	838	1.05	(0.53; 2.07)	0.899
• Age 25-34	1,895	1.15	(0.59; 2.23)	0.689
• Age 35-44	3,494	1.54	(0.79; 2.98)	0.203
• Age 45-54	7,642	2.14	(1.11; 4.13)	0.024
• Age 55-64	8,988	2.75	(1.42; 5.31)	0.003
• Age >=65	7,570	3.80	(1.97; 7.35)	<0.001
Gender:				
• Male (ref)	17,215	1.00		
• Female	13,285	0.84	(0.8; 0.88)	<0.001
Primary diagnosis:				
• Unknown primary (ref)	8,334	1.00		
• Diabetes mellitus	17,062	1.40	(1.33; 1.47)	<0.001
• GN/SLE	1,224	0.73	(0.64; 0.84)	<0.001
• Polycystic kidney	327	0.90	(0.72; 1.13)	0.362
• Obstructive nephropathy	698	0.97	(0.84; 1.11)	0.663
• Others	2,855	0.92	(0.85; 1)	0.064
Year start dialysis:				
• 2000-2001 (ref)	14	1.00		
• 2002-2003	4,840	1.05	(0.99; 1.11)	0.085
• 2004-2005	2,820	1.11	(1.03; 1.19)	0.004
• 2006-2007	7,512	1.05	(0.99; 1.12)	0.129
• 2008-2009	8,213	0.96	(0.88; 1.04)	0.289
BMI:				
• BMI<18.5	2,054	1.38	(1.25; 1.52)	<0.001
• BMI 18.5-25	19,801	1.20	(1.14; 1.27)	<0.001
• >=25 (ref)	8,645	1.00		
Serum albumin (g/L):				
• <30	1,049	4.43	(4.01; 4.9)	<0.001
• 30-<35	3,266	2.23	(2.07; 2.4)	<0.001
• 35-<40	15,444	1.81	(1.72; 1.91)	<0.001
• >=40 (ref)	10,741	1.00		
Serum cholesterol (mmol/L):				
• <3.2	1,476	1.13	(1.02; 1.26)	0.016
• 3.2-<5.2	23,168	1.22	(1.15; 1.29)	<0.001
• >=5.2 (ref)	5,856	1.00		
Kt/V:				
• <1	786	1.32	(1.15; 1.52)	<0.001
• 1-<1.2	2,718	1.01	(0.93; 1.09)	0.865
• 1.2-<1.4 (ref)	5,836	1.00		
• 1.4-<1.6	8,643	1.09	(1.02; 1.15)	0.008
• >=1.6	12,517	0.91	(0.85; 0.97)	0.004

Factors	N	Hazard Ratio	95% CI	P-value
Diastolic BP (mmHg):				
• <70	4,680	0.85	(0.79; 0.91)	<0.001
• 70-<80	12,348	1.11	(1.06; 1.17)	<0.001
• 80-<90 (ref)		1.00		
• 90-<100	2,750	1.03	(0.94; 1.12)	0.544
• >=100	753	1.41	(1.21; 1.65)	<0.001
Hemoglobin:				
• <8	2,460	4.01	(3.64; 4.4)	<0.001
• 8-<9	4,079	2.69	(2.47; 2.94)	<0.001
• 9-<10	9,845	2.60	(2.4; 2.81)	<0.001
• 10-<11	8,334	1.63	(1.5; 1.76)	<0.001
• 11-<12 (ref)	4,103	1.00		
• >=12	1,679	1.02	(0.89; 1.16)	0.811
Serum calcium (mmol/L):				
• <2.2	12,589	1.05	(1; 1.1)	0.048
• 2.2-<2.6 (ref)	17,461	1.00		
• >=2.6	450	1.79	(1.55; 2.08)	<0.001
Calcium Phosphate product (mmol2/L2):				
• <3.5	10,050	0.80	(0.75; 0.87)	<0.001
• 3.5-<4.5 (ref)	13,905	1.00		
• 4.5-<5.5	4,614	0.73	(0.66; 0.8)	<0.001
• >=5.5	1,931	0.76	(0.64; 0.9)	0.001
Serum Phosphate (mmol/L):				
• <1.6	10,480	0.97	(0.9; 1.05)	0.476
• 1.6-<2.0 (ref)	13,203	1.00		
• 2.0-<2.2	2,983	0.83	(0.75; 0.91)	<0.001
• 2.2-<2.4	1,742	0.92	(0.81; 1.05)	0.216
• 2.4-<2.6	981	1.03	(0.87; 1.22)	0.736
• >=2.6	1,111	1.27	(1.05; 1.55)	0.014
HBsAg:				
• Negative (ref)	29,431	1.00		
• Positive	1,069	1.02	(0.92; 1.13)	0.712
Anti-HCV:				
• Negative (ref)	29,723	1.00		
• Positive	777	1.01	(0.9; 1.13)	0.889
Cardiovascular disease (CVD):				
• No CVD (ref)	25,653	1.00		
• CVD	4,847	1.30	(1.24; 1.36)	<0.001

Figure 3.4.2: Adjusted hazard ratio for mortality of HD patients uncensored for change of modality by Kt/V (2001-2010 cohort)

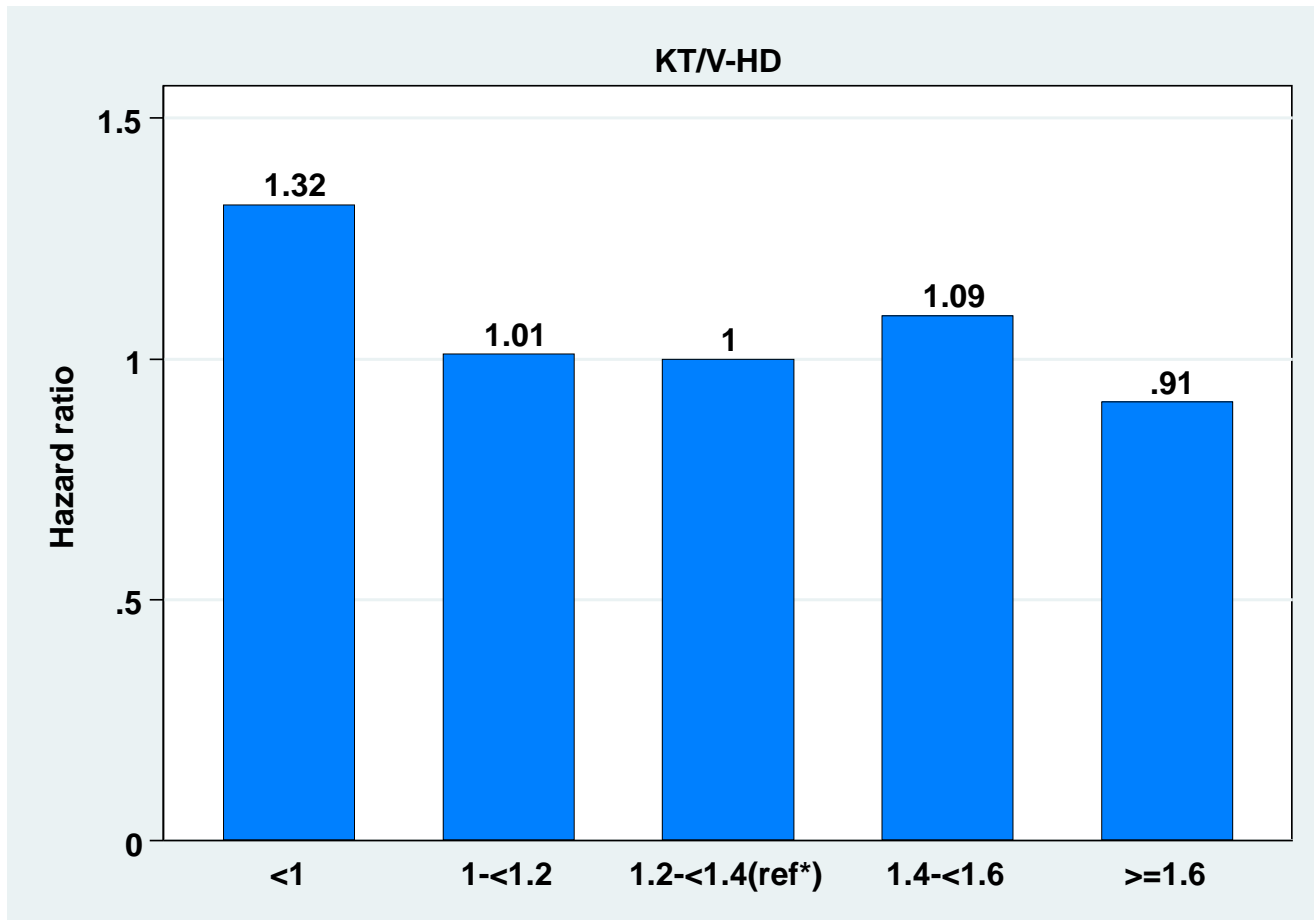


Table 3.4.3: Adjusted hazard ratio for mortality of PD patients uncensored for change of modality (2001-2010 cohort)

Factors	N	Hazard Ratio	95% CI	P-value
Age (years):				
• Age 1-14 (ref)	303	1.00		
• Age 15-24	359	2.07	(1.2; 3.55)	0.008
• Age 25-34	346	2.60	(1.3; 5.18)	0.007
• Age 35-44	475	3.77	(1.92; 7.41)	<0.001
• Age 45-54	870	5.94	(3.02; 11.68)	<0.001
• Age 55-64	997	6.70	(3.43; 13.08)	<0.001
• Age >=65	749	10.72	(5.46; 21.07)	<0.001
Gender:				
• Male (ref)	2,062	1.00		
• Female	2,037	0.90	(0.8; 1.02)	0.096
Primary diagnosis:				
• Unknown primary (ref)	914	1.00		
• Diabetes mellitus	1,988	1.85	(1.53; 2.23)	<0.001
• GN/SLE	516	0.84	(0.65; 1.1)	0.206
• Polycystic kidney	39	0.67	(0.35; 1.26)	0.212
• Obstructive nephropathy	168	1.06	(0.76; 1.49)	0.718
• Others	474	0.88	(0.7; 1.09)	0.242
Year start dialysis:				
• 2000-2001 (ref)	595	1.00		
• 2002-2003	661	0.97	(0.84; 1.12)	0.676
• 2004-2005	314	0.86	(0.7; 1.04)	0.123
• 2006-2007	1,083	0.90	(0.77; 1.06)	0.201
• 2008-2009	1,048	0.67	(0.53; 0.84)	0.001
BMI:				
• BMI <18.5	548	1.44	(1.15; 1.8)	0.001
• BMI 18.5-25	2,089	1.12	(1; 1.26)	0.052
• >=25 (ref)	1,462	1.00		
Serum albumin (g/L):				
• <30	1,205	1.64	(1.24; 2.15)	<0.001
• 30-<35	1,572	1.12	(0.86; 1.46)	0.416
• 35-<40	1,020	0.83	(0.63; 1.09)	0.183
• >=40 (ref)	302	1.00		
Serum cholesterol (mmol/L):				
• <3.2	69	1.26	(0.86; 1.85)	0.244
• 3.2-<5.2	2,007	0.96	(0.86; 1.07)	0.469
• >=5.2 (ref)	2,023	1.00		
Kt/V:				
• <=1.7	2,848	0.84	(0.67; 1.07)	0.161
• 1.7-<=2.0 (ref)	853	1.00		
• >2.0	398	1.56	(0.9; 2.7)	0.116

Factors	N	Hazard Ratio	95% CI	P-value
Diastolic BP (mmHg):				
• <70	521	1.21	(1.02; 1.44)	0.033
• 70-<80	1,484	1.02	(0.89; 1.15)	0.802
• 80-<90 (ref)	1,555	1.00		
• 90-<100	474	1.11	(0.91; 1.34)	0.310
• >=100	65	0.90	(0.54; 1.52)	0.697
Hemoglobin:				
• <8	195	1.92	(1.47; 2.51)	<0.001
• 8-<9	465	1.58	(1.3; 1.94)	<0.001
• 9-<10	940	1.34	(1.14; 1.58)	0.001
• 10-<11	1,294	1.16	(0.99; 1.35)	0.061
• 11-<12 (ref)	795	1.00		
• >=12	410	0.96	(0.78; 1.19)	0.718
Serum calcium (mmol/L):				
• <2.2	1,694	0.97	(0.86; 1.09)	0.594
• 2.2-<2.6 (ref)	2,309	1.00		
• >=2.6	96	1.55	(1.15; 2.1)	0.004
Calcium Phosphate product (mmol/L²):				
• <3.5	2,371	1.16	(0.96; 1.42)	0.131
• 3.5-<4.5 (ref)	1,171	1.00		
• 4.5-<5.5	416	0.85	(0.65; 1.11)	0.232
• >=5.5	141	0.85	(0.51; 1.42)	0.539
Serum Phosphate (mmol/L):				
• <1.6	2,457	1.19	(0.97; 1.46)	0.097
• 1.6-<2.0 (ref)	1,106	1.00		
• 2.0-<2.2	232	1.71	(1.28; 2.29)	0.000
• 2.2-<2.4	155	1.26	(0.85; 1.89)	0.254
• 2.4-<2.6	78	1.80	(1.11; 2.93)	0.018
• >=2.6	71	1.80	(0.95; 3.39)	0.070
HBsAg:				
• Negative (ref)	3955	1.00		
• Positive	144	0.95	(0.73; 1.24)	0.725
Anti-HCV:				
• Negative (ref)	4032	1.00		
• Positive	67	1.18	(0.81; 1.72)	0.376
Cardiovascular disease (CVD):				
• No CVD (ref)	3212	1.00		
• CVD	887	1.38	(1.22; 1.55)	<0.001

Figure 3.4.3(a): Unadjusted hazard ratio for mortality of PD patients uncensored for change of modality Kt/V (2001-2010)

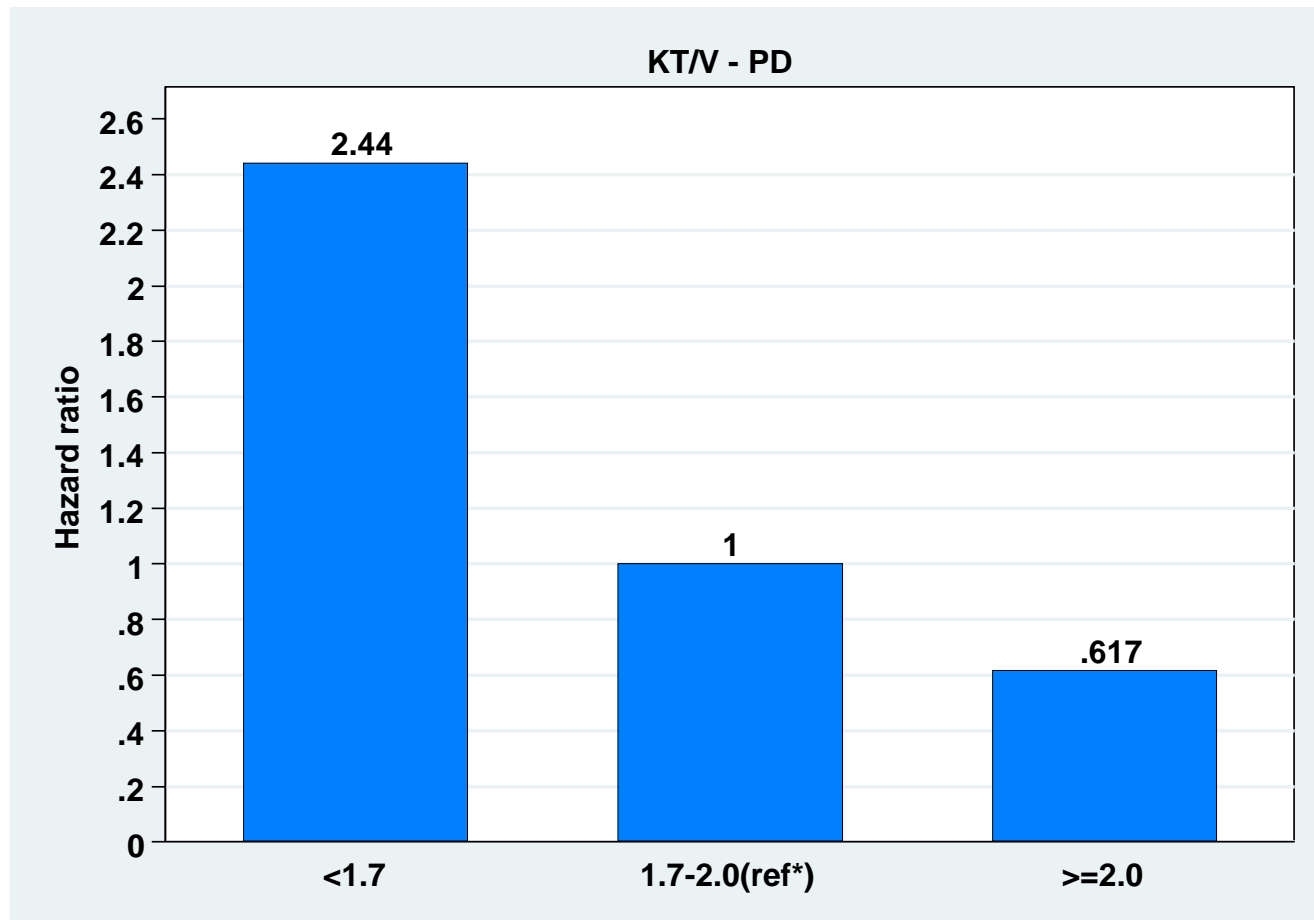


Figure 3.4.3(b): Adjusted hazard ratio for mortality of PD patients uncensored for change of modality by Kt/V (2001-2010 cohort)

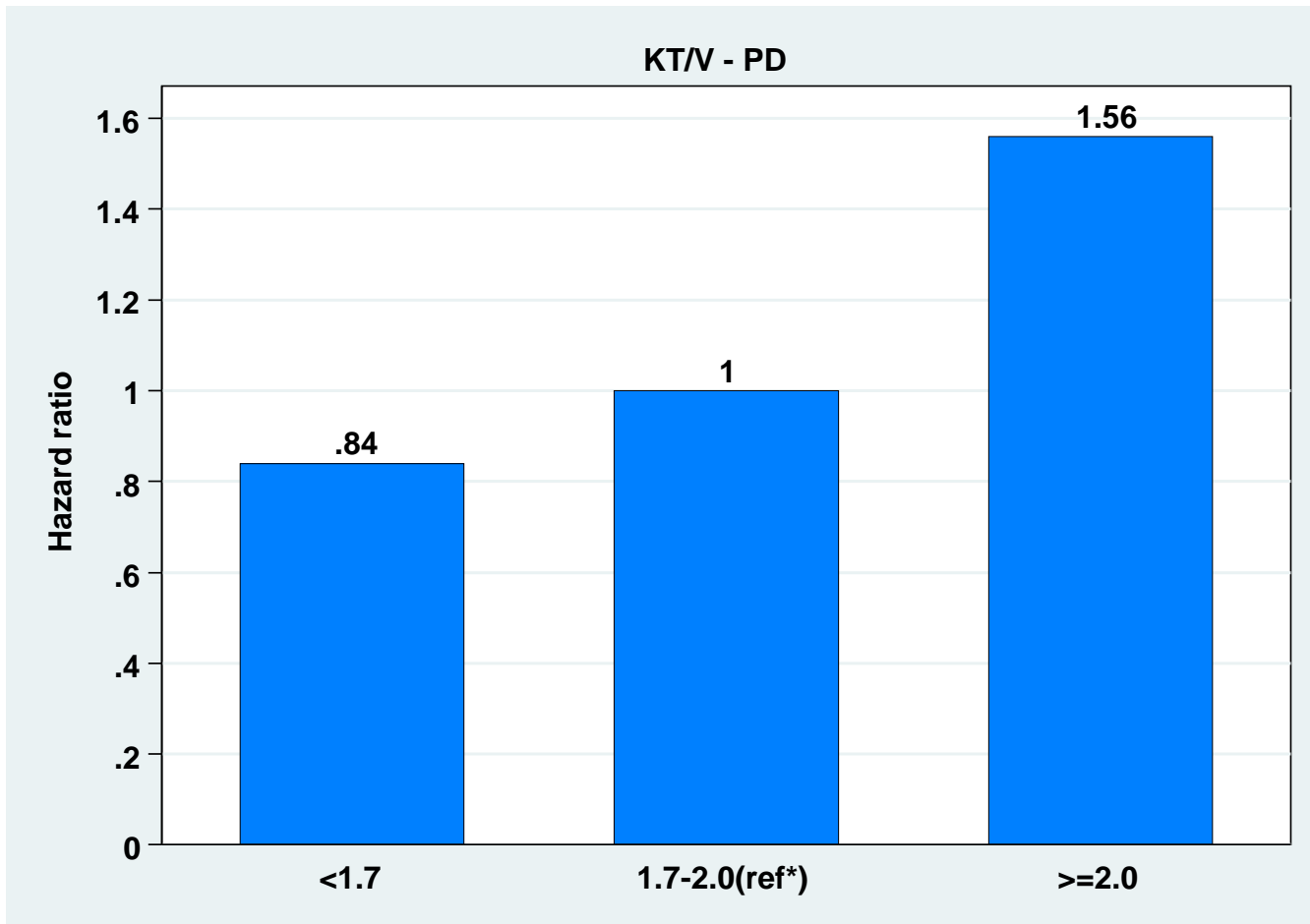


Figure 3.4.4(a): Variations in RAMR by HD centres, 2009

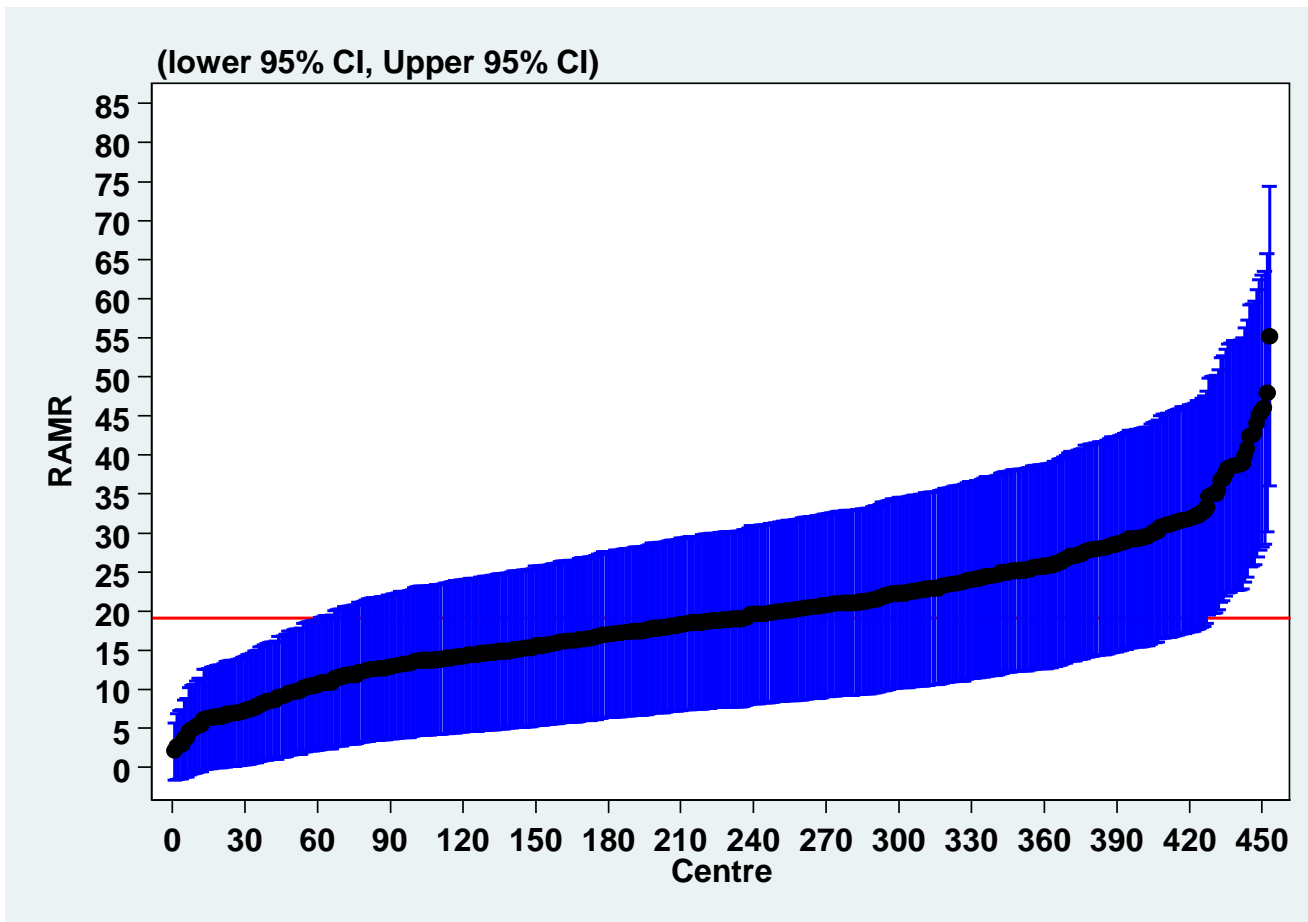


Figure 3.4.4(b): Funnel plot of RAMR by HD centre, 2009

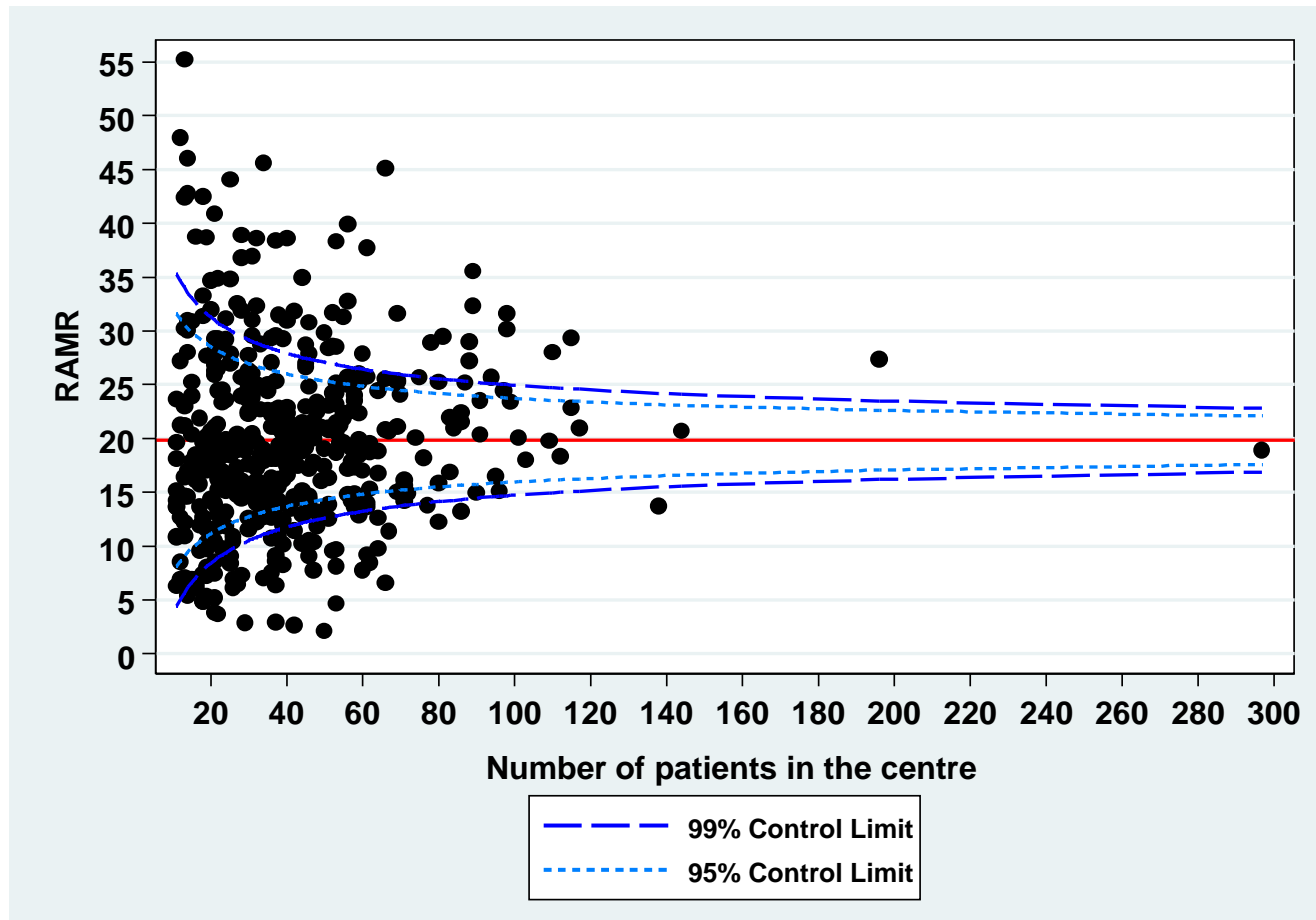


Figure 3.4.5(a): Variations in RAMR by PD centres, 2009

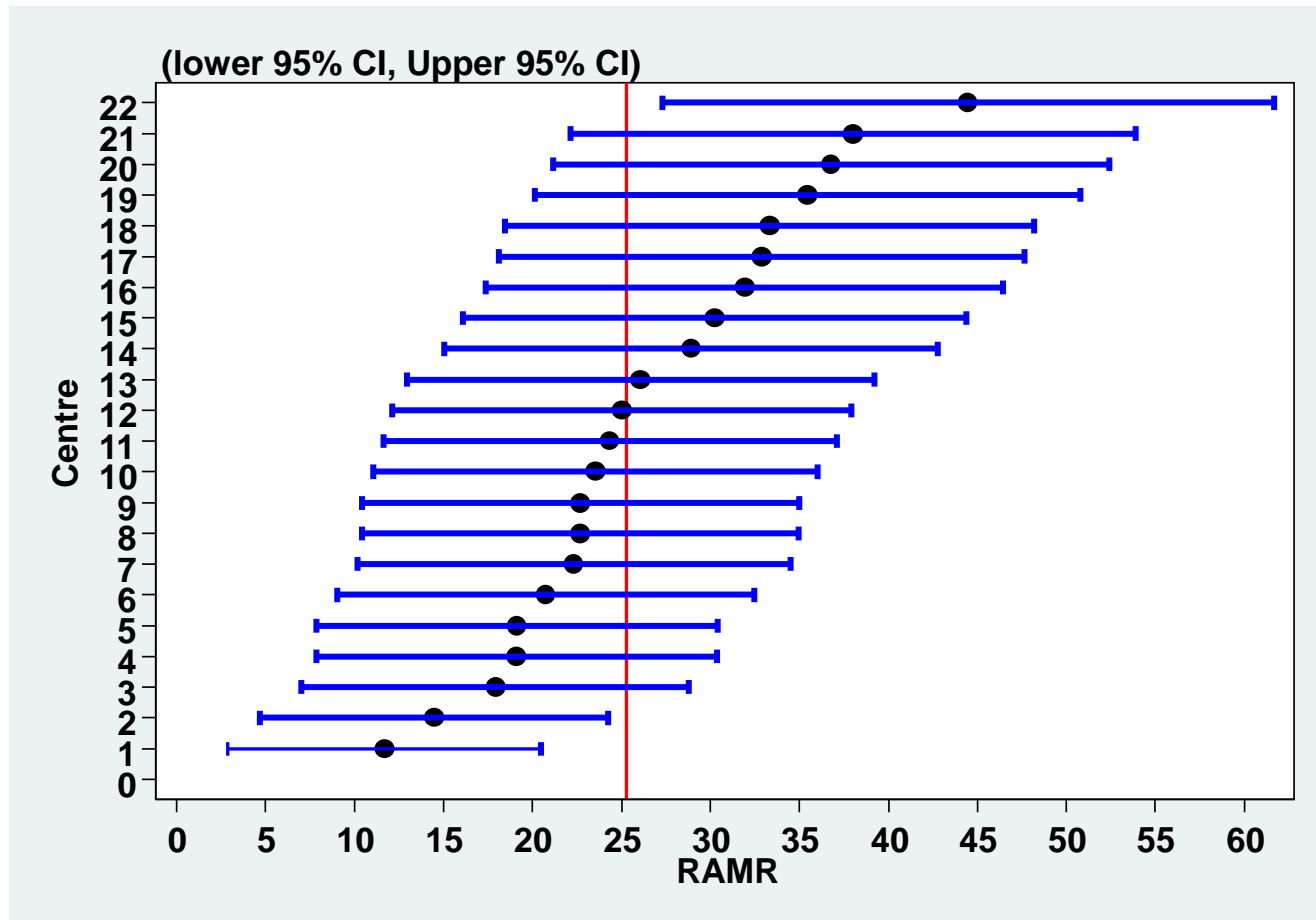


Figure 3.4.5(b): Funnel plot for RAMR by PD centres, 2009

