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Supplemental Table 1 Multiple Myeloma and Chronic Kidney Disease–related Deaths, Stratified by Sex and Race, in Adults in the United States, 1999 to 2023.

Year	Overall	Women	Men	NH White	NH Black or African American	Hispanic or Latino	NH Asian or Pacific Islander	NH American Indian or Alaska Native
1999	640	303	337	420	168	38	11	Suppressed
2000	658	290	368	422	181	38	14	Suppressed
2001	736	355	381	484	197	37	14	Suppressed
2002	763	349	414	522	178	48	13	Suppressed
2003	848	370	478	570	214	42	16	Suppressed
2004	791	349	442	532	200	37	18	Suppressed
2005	856	356	500	583	211	42	17	Suppressed
2006	812	384	428	535	206	52	15	Suppressed
2007	804	352	452	532	188	60	19	Suppressed
2008	700	309	391	469	171	42	14	Suppressed
2009	680	278	402	458	155	49	15	Suppressed
2010	676	283	393	426	163	63	19	Suppressed
2011	1,115	466	649	736	260	80	33	Suppressed
2012	1,237	496	741	793	293	106	38	Suppressed
2013	951	394	557	634	235	63	10	Suppressed
2014	1,019	430	589	697	214	86	16	Suppressed
2015	1,076	449	627	686	266	84	29	11
2016	1,168	465	703	769	279	89	28	Suppressed
2017	1,176	478	698	750	295	95	28	Suppressed
2018	1,202	472	730	805	264	91	29	13
2019	1,260	496	764	822	289	113	34	Suppressed
2020	1,318	549	769	870	320	91	33	Suppressed
2021	1,468	581	887	1,001	310	112	34	Suppressed
2022	1,357	518	839	871	321	116	41	Suppressed
2023	1,295	559	736	847	301	103	37	Suppressed
Total	24,606	10,331	14,275	16,234	5,879	1,777	575	24

NH, non-Hispanic

Supplemental Table 2 Multiple Myeloma and Chronic Kidney Disease–related Mortality, Stratified by Place of Death in Adults in the United States, 1999 to 2023.

Place of Death	Deaths
Medical Facility - Inpatient	11,386
Medical Facility - Outpatient or ER	798
Medical Facility - Dead on Arrival	51
Medical Facility - Status unknown	19
Decedent's home	6,417
Hospice facility	1,809
Nursing home/long-term care	3,271
Other	808
Place of death unknown	44
Total	24,603

Supplemental Table 3 Annual percent change (APC) of Multiple Myeloma and Chronic Kidney Disease–related Age-Adjusted Mortality Rates per 100,000 in Adults in the United States, 1999 to 2023.

Year Interval	APC (95% CI)
Overall	
1999-2023	1.21 (0.54 to 2)
Female	
1999-2023	0.71 (0.09 to 1.38)
Male	
1999-2023	1.39 (0.65 to 2.26)
NH White	
1999-2023	1.61 (0.77 to 2.54)
NH Black or African American	
1999-2023	−0.0009 (−0.64 to 0.7)
Hispanic or Latino	
1999-2023	0.21 (−0.8 to 1.51)
Northeast	
1999-2023	0.28 (−0.48 to 1.14)
Midwest	
1999-2023	1.61 (0.96 to 2.36)
South	
1999-2023	1.15 (0.58 to 1.83)
West	
1999-2023	1.44 (0.5 to 2.56)
Metropolitan	
1999-2020	0.97 (0.2 to 1.86)
Non-metropolitan	
1999-2020	1.52 (0.49 to 2.81)
Age 45-64 Years	
1999-2010	−1.65 (−10.53 to 0.31)
2010-2023	2.09 (0.57 to 9.09)
Age 65+ Years	
1999-2023	1.14 (0.46 to 1.93)

APC = annual percent change; NH = non-Hispanic

Supplemental Table 4: Overall and Sex-Stratified Multiple Myeloma and Chronic Kidney Disease–Related Age-Adjusted Mortality Rates per 100,000 in Adults in the United States, 1999 to 2023.

Year	Overall	Women	Men
1999	0.65 (0.6-0.71)	0.54 (0.48-0.6)	0.83 (0.74-0.93)
2000	0.68 (0.62-0.73)	0.51 (0.45-0.57)	0.91 (0.82-1.01)
2001	0.74 (0.69-0.8)	0.62 (0.56-0.69)	0.91 (0.82-1)
2002	0.75 (0.7-0.81)	0.62 (0.55-0.69)	1.01 (0.91-1.11)
2003	0.84 (0.79-0.9)	0.64 (0.57-0.7)	1.11 (1.01-1.22)
2004	0.76 (0.7-0.81)	0.6 (0.54-0.66)	1.05 (0.95-1.15)
2005	0.85 (0.79-0.9)	0.6 (0.54-0.67)	1.14 (1.04-1.25)
2006	0.75 (0.7-0.8)	0.61 (0.55-0.68)	0.95 (0.86-1.04)
2007	0.76 (0.71-0.81)	0.6 (0.53-0.66)	1 (0.9-1.09)
2008	0.62 (0.58-0.67)	0.48 (0.43-0.53)	0.83 (0.75-0.92)
2009	0.6 (0.56-0.65)	0.43 (0.38-0.48)	0.82 (0.73-0.9)
2010	0.6 (0.56-0.65)	0.45 (0.39-0.5)	0.82 (0.74-0.9)
2011	0.93 (0.88-0.99)	0.7 (0.64-0.77)	1.3 (1.2-1.4)
2012	1.02 (0.96-1.08)	0.72 (0.65-0.78)	1.44 (1.33-1.54)
2013	0.75 (0.7-0.8)	0.56 (0.5-0.62)	1.05 (0.96-1.14)
2014	0.81 (0.76-0.86)	0.6 (0.54-0.66)	1.06 (0.98-1.15)
2015	0.81 (0.76-0.86)	0.61 (0.55-0.67)	1.12 (1.03-1.21)
2016	0.87 (0.82-0.92)	0.64 (0.58-0.69)	1.24 (1.15-1.33)
2017	0.88 (0.83-0.93)	0.65 (0.59-0.71)	1.22 (1.13-1.32)
2018	0.87 (0.82-0.92)	0.57 (0.52-0.63)	1.17 (1.08-1.25)
2019	0.88 (0.83-0.93)	0.65 (0.59-0.71)	1.21 (1.12-1.3)
2020	0.9 (0.85-0.94)	0.67 (0.61-0.72)	1.2 (1.11-1.28)
2021	1.04 (0.99-1.1)	0.75 (0.69-0.82)	1.45 (1.35-1.54)
2022	0.9 (0.85-0.94)	0.63 (0.57-0.68)	1.3 (1.21-1.39)
2023	0.86 (0.81-0.91)	0.67 (0.62-0.73)	1.13 (1.05-1.22)

Supplemental Table 5 Multiple Myeloma and Chronic Kidney Disease–related Age-Adjusted Mortality Rates per 100,000, Stratified by Race in Adults in the United States, 1999 to 2023.

Year	NH White	NH Black or African American	Hispanic or Latino	NH Asian or Pacific Islander	NH American Indian or Alaska Native
1999	0.55 (0.5-0.61)	2.06 (1.75-2.38)	0.73 (0.51-1.01)	Suppressed	Suppressed
2000	0.53 (0.48-0.59)	2.2 (1.88-2.53)	0.78 (0.55-1.08)	Suppressed	Suppressed
2001	0.6 (0.55-0.66)	2.35 (2.02-2.68)	0.61 (0.42-0.85)	Suppressed	Suppressed
2002	0.64 (0.58-0.69)	2.11 (1.8-2.42)	0.89 (0.65-1.19)	Suppressed	Suppressed
2003	0.72 (0.66-0.78)	2.46 (2.12-2.79)	0.72 (0.51-0.99)	Suppressed	Suppressed
2004	0.64 (0.58-0.69)	2.25 (1.94-2.57)	0.62 (0.43-0.87)	Suppressed	Suppressed
2005	0.7 (0.64-0.75)	2.29 (1.97-2.6)	0.6 (0.43-0.81)	Suppressed	Suppressed
2006	0.61 (0.56-0.66)	2.18 (1.87-2.48)	0.75 (0.55-1)	Suppressed	Suppressed
2007	0.63 (0.58-0.69)	1.95 (1.66-2.24)	0.87 (0.66-1.12)	Suppressed	Suppressed
2008	0.54 (0.49-0.59)	1.76 (1.49-2.02)	0.47 (0.33-0.65)	Suppressed	Suppressed
2009	0.52 (0.47-0.56)	1.57 (1.32-1.82)	0.64 (0.47-0.86)	Suppressed	Suppressed
2010	0.46 (0.42-0.51)	1.64 (1.38-1.89)	0.72 (0.55-0.93)	Suppressed	Suppressed
2011	0.81 (0.75-0.87)	2.47 (2.17-2.78)	0.86 (0.68-1.08)	0.75 (0.51-1.07)	Suppressed
2012	0.86 (0.8-0.92)	2.7 (2.39-3.02)	1.13 (0.91-1.35)	0.77 (0.53-1.07)	Suppressed
2013	0.65 (0.6-0.71)	2.07 (1.8-2.35)	0.66 (0.5-0.84)	Suppressed	Suppressed
2014	0.73 (0.68-0.79)	1.8 (1.55-2.05)	0.78 (0.62-0.97)	Suppressed	Suppressed
2015	0.71 (0.66-0.77)	2.19 (1.91-2.46)	0.73 (0.58-0.91)	0.46 (0.3-0.68)	Suppressed
2016	0.76 (0.7-0.81)	2.21 (1.94-2.47)	0.77 (0.61-0.96)	0.45 (0.3-0.65)	Suppressed
2017	0.76 (0.7-0.81)	2.31 (2.04-2.58)	0.76 (0.61-0.94)	0.42 (0.27-0.61)	Suppressed
2018	0.77 (0.71-0.82)	1.92 (1.68-2.16)	0.71 (0.57-0.88)	0.42 (0.28-0.6)	Suppressed
2019	0.76 (0.71-0.82)	2.1 (1.85-2.35)	0.83 (0.67-0.99)	0.47 (0.32-0.66)	Suppressed
2020	0.77 (0.72-0.82)	2.24 (1.99-2.5)	0.67 (0.54-0.83)	0.42 (0.29-0.6)	Suppressed
2021	0.94 (0.88-1)	2.34 (2.07-2.6)	0.8 (0.65-0.95)	0.5 (0.35-0.71)	Suppressed
2022	0.78 (0.73-0.83)	2.18 (1.94-2.43)	0.8 (0.65-0.95)	0.55 (0.39-0.75)	Suppressed
2023	0.79 (0.73-0.84)	2.11 (1.87-2.36)	0.7 (0.56-0.84)	0.49 (0.34-0.68)	Suppressed

NH = non-Hispanic.

Supplemental Table 6 Multiple Myeloma and Chronic Kidney Disease–related Crude Mortality Rates per 100,000, Stratified by Age in Adults in the United States, 1999 to 2023.

Year	Age 45-64 Years	Age 65+ Years
1999	0.23 (0.2-0.27)	1.43 (1.31-1.56)
2000	0.23 (0.19-0.27)	1.47 (1.34-1.6)
2001	0.26 (0.22-0.3)	1.61 (1.48-1.74)
2002	0.23 (0.19-0.26)	1.72 (1.58-1.86)
2003	0.25 (0.21-0.29)	1.88 (1.74-2.02)
2004	0.23 (0.19-0.26)	1.74 (1.6-1.88)
2005	0.24 (0.21-0.28)	1.86 (1.72-1.99)
2006	0.22 (0.19-0.26)	1.74 (1.6-1.87)
2007	0.22 (0.18-0.25)	1.69 (1.56-1.82)
2008	0.2 (0.17-0.23)	1.4 (1.28-1.51)
2009	0.19 (0.16-0.22)	1.34 (1.23-1.45)
2010	0.17 (0.14-0.2)	1.33 (1.22-1.45)
2011	0.25 (0.22-0.29)	2.18 (2.04-2.33)
2012	0.25 (0.22-0.29)	2.38 (2.23-2.52)
2013	0.2 (0.17-0.23)	1.75 (1.63-1.88)
2014	0.24 (0.2-0.27)	1.78 (1.65-1.9)
2015	0.26 (0.23-0.3)	1.79 (1.67-1.91)
2016	0.24 (0.21-0.28)	1.96 (1.83-2.08)
2017	0.24 (0.21-0.28)	1.91 (1.79-2.03)
2018	0.25 (0.22-0.28)	1.89 (1.78-2.01)
2019	0.24 (0.21-0.27)	1.96 (1.84-2.08)
2020	0.28 (0.24-0.31)	1.95 (1.84-2.07)
2021	0.24 (0.21-0.28)	2.29 (2.17-2.42)
2022	0.27 (0.24-0.31)	1.99 (1.87-2.1)
2023	0.23 (0.2-0.26)	1.89 (1.78-2)

Supplemental Table 7 Multiple Myeloma and Chronic Kidney Disease–related Age-Adjusted Mortality Rates per 100,000, Stratified by Census Region in Adults in the United States, 1999 to 2023.

Census region	Year	Age-Adjusted Rate
Northeast	1999	0.71 (0.59-0.82)
Northeast	2000	0.72 (0.6-0.84)
Northeast	2001	0.85 (0.73-0.98)
Northeast	2002	0.7 (0.59-0.81)
Northeast	2003	0.84 (0.72-0.96)
Northeast	2004	0.76 (0.65-0.88)
Northeast	2005	0.81 (0.69-0.93)
Northeast	2006	0.72 (0.61-0.84)
Northeast	2007	0.65 (0.54-0.76)
Northeast	2008	0.51 (0.41-0.6)
Northeast	2009	0.54 (0.45-0.64)
Northeast	2010	0.53 (0.43-0.62)
Northeast	2011	0.81 (0.69-0.93)
Northeast	2012	0.8 (0.68-0.91)
Northeast	2013	0.7 (0.59-0.81)
Northeast	2014	0.71 (0.6-0.82)
Northeast	2015	0.74 (0.63-0.85)
Northeast	2016	0.91 (0.79-1.04)
Northeast	2017	0.77 (0.66-0.88)
Northeast	2018	0.68 (0.58-0.79)
Northeast	2019	0.79 (0.68-0.9)
Northeast	2020	0.75 (0.64-0.85)
Northeast	2021	0.94 (0.82-1.06)
Northeast	2022	0.71 (0.61-0.81)
Northeast	2023	0.72 (0.62-0.82)
Midwest	1999	0.63 (0.53-0.74)
Midwest	2000	0.7 (0.59-0.81)
Midwest	2001	0.7 (0.59-0.81)
Midwest	2002	0.8 (0.68-0.92)
Midwest	2003	0.83 (0.71-0.95)

Midwest	2004	0.79 (0.68-0.9)
Midwest	2005	0.77 (0.65-0.88)
Midwest	2006	0.71 (0.6-0.81)
Midwest	2007	0.74 (0.63-0.84)
Midwest	2008	0.65 (0.55-0.75)
Midwest	2009	0.66 (0.56-0.76)
Midwest	2010	0.61 (0.52-0.71)
Midwest	2011	0.98 (0.86-1.11)
Midwest	2012	1.06 (0.93-1.18)
Midwest	2013	0.73 (0.63-0.83)
Midwest	2014	0.87 (0.76-0.98)
Midwest	2015	0.82 (0.71-0.92)
Midwest	2016	0.88 (0.77-0.99)
Midwest	2017	0.86 (0.76-0.97)
Midwest	2018	0.93 (0.82-1.04)
Midwest	2019	0.92 (0.81-1.03)
Midwest	2020	0.98 (0.87-1.09)
Midwest	2021	1.09 (0.97-1.2)
Midwest	2022	0.94 (0.83-1.05)
Midwest	2023	0.98 (0.86-1.09)
South	1999	0.7 (0.61-0.79)
South	2000	0.73 (0.64-0.81)
South	2001	0.78 (0.69-0.88)
South	2002	0.85 (0.75-0.94)
South	2003	0.86 (0.76-0.96)
South	2004	0.76 (0.67-0.85)
South	2005	0.82 (0.73-0.92)
South	2006	0.81 (0.72-0.9)
South	2007	0.8 (0.71-0.89)
South	2008	0.66 (0.58-0.73)
South	2009	0.59 (0.51-0.66)
South	2010	0.64 (0.56-0.71)
South	2011	0.96 (0.86-1.05)
South	2012	0.96 (0.87-1.05)
South	2013	0.82 (0.73-0.9)
South	2014	0.78 (0.7-0.86)

South	2015	0.86 (0.78-0.94)
South	2016	0.88 (0.8-0.97)
South	2017	0.94 (0.85-1.02)
South	2018	0.86 (0.78-0.94)
South	2019	0.91 (0.83-0.99)
South	2020	0.95 (0.87-1.03)
South	2021	1.06 (0.97-1.14)
South	2022	0.95 (0.87-1.03)
South	2023	0.87 (0.8-0.95)
West	1999	0.59 (0.48-0.7)
West	2000	0.5 (0.4-0.6)
West	2001	0.69 (0.57-0.81)
West	2002	0.67 (0.56-0.79)
West	2003	0.79 (0.67-0.92)
West	2004	0.7 (0.59-0.81)
West	2005	0.89 (0.76-1.01)
West	2006	0.78 (0.67-0.9)
West	2007	0.79 (0.67-0.9)
West	2008	0.65 (0.54-0.75)
West	2009	0.63 (0.53-0.73)
West	2010	0.53 (0.44-0.62)
West	2011	1.04 (0.91-1.16)
West	2012	1.26 (1.13-1.4)
West	2013	0.78 (0.67-0.89)
West	2014	0.87 (0.76-0.98)
West	2015	0.8 (0.69-0.9)
West	2016	0.85 (0.75-0.96)
West	2017	0.89 (0.78-1)
West	2018	0.85 (0.75-0.95)
West	2019	0.84 (0.74-0.94)
West	2020	0.85 (0.75-0.95)
West	2021	1.02 (0.91-1.13)
West	2022	1.01 (0.9-1.12)
West	2023	0.86 (0.76-0.96)

Supplemental Table 8 Multiple Myeloma and Chronic Kidney Disease–related Age-Adjusted Mortality Rates per 100,000, Stratified by Urban-Rural Classification in Adults in the United States, 1999 to 2020.

Year	Metropolitan	Non-metropolitan
1999	0.65 (0.6-0.71)	0.66 (0.54-0.78)
2000	0.71 (0.65-0.77)	0.65 (0.53-0.76)
2001	0.76 (0.7-0.82)	0.66 (0.54-0.78)
2002	0.77 (0.71-0.83)	0.78 (0.65-0.9)
2003	0.86 (0.8-0.93)	0.76 (0.64-0.89)
2004	0.78 (0.72-0.84)	0.74 (0.62-0.86)
2005	0.84 (0.78-0.9)	0.77 (0.65-0.9)
2006	0.79 (0.73-0.85)	0.66 (0.55-0.78)
2007	0.76 (0.7-0.82)	0.67 (0.55-0.78)
2008	0.62 (0.57-0.68)	0.61 (0.5-0.72)
2009	0.6 (0.55-0.65)	0.51 (0.41-0.6)
2010	0.6 (0.55-0.65)	0.53 (0.43-0.63)
2011	0.97 (0.91-1.03)	0.88 (0.75-1.01)
2012	1.03 (0.96-1.09)	1.02 (0.88-1.16)
2013	0.81 (0.76-0.87)	0.66 (0.55-0.77)
2014	0.81 (0.76-0.87)	0.71 (0.6-0.82)
2015	0.81 (0.76-0.87)	0.87 (0.74-0.99)
2016	0.9 (0.84-0.96)	0.82 (0.7-0.94)
2017	0.87 (0.82-0.93)	0.9 (0.77-1.02)
2018	0.88 (0.82-0.93)	0.75 (0.64-0.86)
2019	0.87 (0.82-0.93)	0.95 (0.82-1.07)
2020	0.87 (0.81-0.92)	0.93 (0.81-1.05)