

**Supplementary Table 1: Risk of prostate cancer with increasing quintiles individual fatty acids**

	Quintiles of Intake					p-for-trend
	I	II	III	IV	V	
<b>Butyric acid (4:0)</b>						
Quintile median (% energy)	0.055	0.095	0.14	0.20	0.33	
Nonadvanced cases (n)	3907	3852	3772	3782	3621	
Multivariable HR	1.00	1.01	1.01	1.03	1.02	0.45
95% CI		(0.97-1.06)	(0.97-1.06)	(0.98-1.08)	(0.97-1.06)	
Advanced cases (n)	588	564	598	580	600	
Multivariable HR	1.00	0.96	1.03	1.01	1.06	0.19
95% CI		(0.86-1.08)	(0.92-1.16)	(0.90-1.14)	(0.94-1.19)	
Fatal cases (n)	129	116	174	141	165	
Multivariable HR	1.00	0.90	1.33	1.05	1.16	0.18
95% CI		(0.70-1.16)	(1.06-1.67)	(0.83-1.34)	(0.92-1.47)	
<b>Caproic acid (6:0)</b>						
Quintile median (% energy)	0.022	0.043	0.069	0.11	0.18	
Nonadvanced cases (n)	3943	3802	3727	3826	3636	
Multivariable HR	1.00	0.99	0.99	1.03	1.01	0.42
95% CI		(0.95-1.04)	(0.95-1.04)	(0.99-1.08)	(0.96-1.05)	
Advanced cases (n)	584	579	587	578	602	
Multivariable HR	1.00	1.00	1.02	1.01	1.07	0.23
95% CI		(0.89-1.12)	(0.91-1.14)	(0.90-1.14)	(0.95-1.20)	
Fatal cases (n)	136	119	157	149	164	
Multivariable HR	1.00	0.87	1.12	1.03	1.07	0.33
95% CI		(0.68-1.12)	(0.89-1.41)	(0.82-1.31)	(0.85-1.35)	
<b>Caprylic acid (8:0)</b>						
Quintile median (% energy)	0.019	0.035	0.052	0.076	0.12	
Nonadvanced cases (n)	3916	3812	3797	3798	3611	
Multivariable HR	1.00	1.00	1.01	1.03	1.00	0.73
95% CI		(0.96-1.05)	(0.96-1.05)	(0.98-1.08)	(0.96-1.05)	
Advanced cases (n)	583	577	587	592	591	
Multivariable HR	1.00	0.99	1.01	1.04	1.05	0.34
95% CI		(0.89-1.12)	(0.90-1.14)	(0.92-1.17)	(0.93-1.17)	
Fatal cases (n)	132	118	160	155	160	
Multivariable HR	1.00	0.89	1.18	1.11	1.08	0.30
95% CI		(0.69-1.14)	(0.93-1.49)	(0.87-1.40)	(0.85-1.37)	
<b>Capric acid (10:0)</b>						
Quintile median (% energy)	0.049	0.082	0.12	0.17	0.27	
Nonadvanced cases (n)	3929	3870	3773	3772	3590	
Multivariable HR	1.00	1.02	1.02	1.04	1.01	0.76
95% CI		(0.98-1.07)	(0.97-1.06)	(0.99-1.08)	(0.96-1.06)	
Advanced cases (n)	584	576	589	585	596	
Multivariable HR	1.00	1.00	1.03	1.04	1.06	0.23
95% CI		(0.89-1.12)	(0.92-1.16)	(0.92-1.16)	(0.95-1.20)	
Fatal cases (n)	128	119	163	156	159	
Multivariable HR	1.00	0.93	1.24	1.15	1.11	0.27
95% CI		(0.72-1.19)	(0.98-1.56)	(0.91-1.46)	(0.87-1.41)	
<b>Lauric acid (12:0)</b>						
Quintile median (% energy)	0.083	0.13	0.19	0.26	0.42	
Nonadvanced cases (n)	3857	3903	3775	3738	3661	
Multivariable HR	1.00	1.05	1.03	1.03	1.04	0.30
95% CI		(1.00-1.09)	(0.99-1.08)	(0.99-1.08)	(0.99-1.09)	
Advanced cases (n)	571	578	592	608	581	
Multivariable HR	1.00	1.03	1.05	1.09	1.05	0.35
95% CI		(0.91-1.15)	(0.94-1.18)	(0.97-1.22)	(0.93-1.19)	
Fatal cases (n)	131	124	140	165	165	
Multivariable HR	1.00	0.94	1.03	1.18	1.12	0.14
95% CI		(0.73-1.20)	(0.81-1.31)	(0.93-1.49)	(0.88-1.42)	
<b>Myristic acid (14:0)</b>						
Quintile median (% energy)	0.34	0.51	0.68	0.89	1.3	
Nonadvanced cases (n)	3996	3888	3750	3734	3566	
Multivariable HR	1.00	1.02	1.02	1.04	1.02	0.30
95% CI		(0.97-1.06)	(0.97-1.06)	(0.99-1.09)	(0.98-1.07)	
Advanced cases (n)	597	552	593	612	576	

Multivariable HR	1.00	0.94	1.03	1.08	1.03	0.23
95% CI		(0.83-1.05)	(0.92-1.15)	(0.96-1.21)	(0.91-1.16)	
Fatal cases (n)	122	123	169	160	151	
Multivariable HR	1.00	1.00	1.36	1.26	1.13	0.27
95% CI		(0.78-1.29)	(1.08-1.73)	(0.99-1.61)	(0.88-1.45)	
<b>Palmitic acid (16:0)</b>						
Quintile median (% energy)	3.4	4.5	5.3	6.1	7.2	
Nonadvanced cases (n)	4043	3936	3821	3729	3405	
Multivariable HR	1.00	1.00	1.01	1.03	1.02	0.20
95% CI		(0.96-1.05)	(0.97-1.06)	(0.99-1.08)	(0.97-1.07)	
Advanced cases (n)	581	553	634	588	574	
Multivariable HR	1.00	0.96	1.12	1.06	1.09	0.07
95% CI		(0.85-1.08)	(1.00-1.25)	(0.94-1.80)	(0.96-1.23)	
Fatal cases (n)	124	120	169	157	155	
Multivariable HR	1.00	0.94	1.32	1.21	1.18	0.07
95% CI		(0.74-1.22)	(1.04-1.67)	(0.95-1.54)	(0.91-1.52)	
<b>Stearic acid (18:0)</b>						
Quintile median (% energy)	1.5	2.1	2.5	2.9	3.4	
Nonadvanced cases (n)	3998	3928	3822	3754	3432	
Multivariable HR	1.00	1.01	1.02	1.04	1.03	0.10
95% CI		(0.97-1.06)	(0.98-1.07)	(1.00-1.09)	(0.98-1.08)	
Advanced cases (n)	588	560	632	564	586	
Multivariable HR	1.00	0.96	1.10	1.00	1.09	0.15
95% CI		(0.85-1.08)	(0.98-1.23)	(0.89-1.13)	(0.96-1.23)	
Fatal cases (n)	125	121	155	163	161	
Multivariable HR	1.00	0.95	1.19	1.23	1.17	0.07
95% CI		(0.74-1.22)	(0.94-1.52)	(0.96-1.56)	(0.91-1.51)	
<b>Trans-hexadecenoic acid (16:1)</b>						
Quintile median (% energy)	0.0085	0.015	0.021	0.030	0.049	
Nonadvanced cases (n)	4023	3912	3736	3721	3542	
Multivariable HR	1.00	1.02	1.01	1.04	1.01	0.54
95% CI		(0.98-1.07)	(0.97-1.06)	(0.99-1.09)	(0.97-1.06)	
Advanced cases (n)	570	613	580	581	586	
Multivariable HR	1.00	1.10	1.06	1.08	1.10	0.24
95% CI		(0.98-1.23)	(0.94-1.19)	(0.96-1.21)	(0.98-1.24)	
Fatal cases (n)	119	149	131	160	166	
Multivariable HR	1.00	1.24	1.09	1.31	1.32	0.04
95% CI		(0.97-1.58)	(0.85-1.40)	(1.03-1.68)	(1.03-1.68)	
<b>Trans-octadecenoic acid (18:1)</b>						
Quintile median (% energy)	0.98	1.4	1.8	2.1	2.8	
Nonadvanced cases (n)	3930	3747	3754	3784	3719	
Multivariable HR	1.00	0.97	1.00	1.02	1.00	0.38
95% CI		(0.93-1.02)	(0.95-1.04)	(0.98-1.07)	(0.96-1.05)	
Advanced cases (n)	581	610	552	621	566	
Multivariable HR	1.00	1.04	0.95	1.08	0.98	0.86
95% CI		(0.93-1.17)	(0.85-1.07)	(0.96-1.22)	(0.87-1.11)	
Fatal cases (n)	142	142	141	137	163	
Multivariable HR	1.00	0.95	0.93	0.87	0.99	0.87
95% CI		(0.75-1.20)	(0.74-1.18)	(0.69-1.12)	(0.78-1.25)	
<b>Trans-octadecadienoic acid (18:2)</b>						
Quintile median (% energy)	0.13	0.18	0.22	0.27	0.33	
Nonadvanced cases (n)	3889	3845	3718	3744	3738	
Multivariable HR	1.00	1.02	1.01	1.03	1.04	0.09
95% CI		(0.97-1.06)	(0.96-1.06)	(0.99-1.08)	(0.99-1.09)	
Advanced cases (n)	591	589	590	588	572	
Multivariable HR	1.00	1.00	1.00	1.00	0.98	0.79
95% CI		(0.89-1.12)	(0.89-1.13)	(0.89-1.13)	(0.87-1.11)	
Fatal cases (n)	139	144	135	145	162	
Multivariable HR	1.00	0.99	0.90	0.92	0.96	0.65
95% CI		(0.78-1.25)	(0.71-1.15)	(0.72-1.17)	(0.75-1.23)	
<b>Palmitoleic acid (16:1)</b>						
Quintile median (% energy)	0.29	0.41	0.49	0.58	0.73	
Nonadvanced cases (n)	4076	3926	3826	3742	3364	
Multivariable HR	1.00	1.00	1.02	1.05	1.02	0.16
95% CI		(0.96-1.05)	(0.97-1.07)	(1.00-1.10)	(0.97-1.07)	
Advanced cases (n)	569	565	645	601	550	

Multivariable HR	1.00	1.01	1.17	1.12	1.07	1.11
95% CI		(0.89-1.13)	(1.05-1.32)	(1.00-1.26)	(0.95-1.21)	
Fatal cases (n)	132	127	172	149	145	
Multivariable HR	1.00	0.96	1.29	1.12	1.09	0.31
95% CI		(0.75-1.22)	(1.02-1.63)	(0.88-1.43)	(0.85-1.40)	
<b>Oleic acid (18:1)</b>						
Quintile median (% energy)	6.9	9.3	11	12	15	
Nonadvanced cases (n)	3969	3915	3814	3757	3479	
Multivariable HR	1.00	1.02	1.01	1.03	1.02	0.36
95% CI		(0.97-1.06)	(0.97-1.06)	(0.99-1.08)	(0.97-1.07)	
Advanced cases (n)	597	571	604	590	568	
Multivariable HR	1.00	0.96	1.02	1.01	1.01	0.65
95% CI		(0.85-1.08)	(0.91-1.14)	(0.90-1.14)	(0.89-1.14)	
Fatal cases (n)	137	137	137	156	158	
Multivariable HR	1.00	0.98	0.95	1.06	1.05	0.56
95% CI		(0.77-1.24)	(0.74-1.20)	(0.83-1.34)	(0.82-1.34)	
<b>Gadoleic acid (20:1)</b>						
Quintile median (% energy)	0.032	0.045	0.056	0.069	0.095	
Nonadvanced cases (n)	3771	3806	3887	3780	3690	
Multivariable HR	1.00	1.01	1.04	1.02	1.00	0.93
95% CI		(0.97-1.06)	(0.99-1.09)	(0.98-1.07)	(0.96-1.05)	
Advanced cases (n)	573	604	571	584	598	
Multivariable HR	1.00	1.04	0.98	1.01	1.03	0.70
95% CI		(0.92-1.16)	(0.87-1.10)	(0.89-1.13)	(0.92-1.16)	
Fatal cases (n)	149	163	136	138	139	
Multivariable HR	1.00	1.09	0.92	0.94	0.94	0.37
95% CI		(0.87-1.36)	(0.72-1.16)	(0.74-1.18)	(0.75-1.19)	
<b>Eruic acid (22:1)</b>						
Quintile median (% energy)	0.0048	0.0085	0.012	0.018	0.031	
Nonadvanced cases (n)	3629	3798	3767	3809	3931	
Multivariable HR	1.00	1.04	1.03	1.03	1.04	0.31
95% CI		(0.99-1.09)	(0.98-1.08)	(0.98-1.08)	(0.99-1.09)	
Advanced cases (n)	582	593	574	614	567	
Multivariable HR	1.00	1.01	0.96	1.02	0.94	0.29
95% CI		(0.90-1.13)	(0.86-1.09)	(0.91-1.14)	(0.83-1.05)	
Fatal cases (n)	172	160	137	136	120	
Multivariable HR	1.00	0.95	0.83	0.83	0.75	0.02
95% CI		(0.76-1.18)	(0.66-1.04)	(0.66-1.05)	(0.59-0.96)	
<b>Parinaric acid (18:4)</b>						
Quintile median (% energy)	0	0.0035	0.0063			
Nonadvanced cases (n)	12072	2942	3920			
Multivariable HR	1.00	1.01	1.01			0.70
95% CI		(0.97-1.06)	(0.97-1.04)			
Advanced cases (n)	1926	435	569			
Multivariable HR	1.00	0.91	0.92			0.05
95% CI		(0.82-1.02)	(0.84-1.01)			
Fatal cases (n)	509	91	125			
Multivariable HR	1.00	0.72	0.84			0.02
95% CI		(0.57-0.92)	(0.84-0.69)			
<b>Aarachidonic acid (20:4)</b>						
Quintile median (% energy)	0.025	0.038	0.048	0.060	0.081	
Nonadvanced cases (n)	3910	3927	3903	3725	3469	
Multivariable HR	1.00	1.03	1.05	1.04	1.02	0.44
95% CI		(0.98-1.07)	(1.00-1.10)	(1.00-1.09)	(0.97-1.07)	
Advanced cases (n)	578	579	580	621	572	
Multivariable HR	1.00	1.00	1.02	1.11	1.06	0.16
95% CI		(0.89-1.13)	(0.91-1.15)	(0.99-1.25)	(0.94-1.19)	
Fatal cases (n)	148	147	134	155	141	
Multivariable HR	1.00	1.01	0.94	1.13	1.06	0.42
95% CI		(0.80-1.27)	(0.75-1.20)	(0.90-1.42)	(0.84-1.35)	

\*All HR include adjustment for age at entry, race, family history of prostate cancer, education, marital status, PSA testing in the past 3 years, physical activity, smoking, self-reported diabetes, BMI at baseline, calories, alcohol and intake of tomatoes.