

## Supplementary Online Content

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**eTable 1.** Rates of Fractionation Categories Overall by Year of Diagnosis

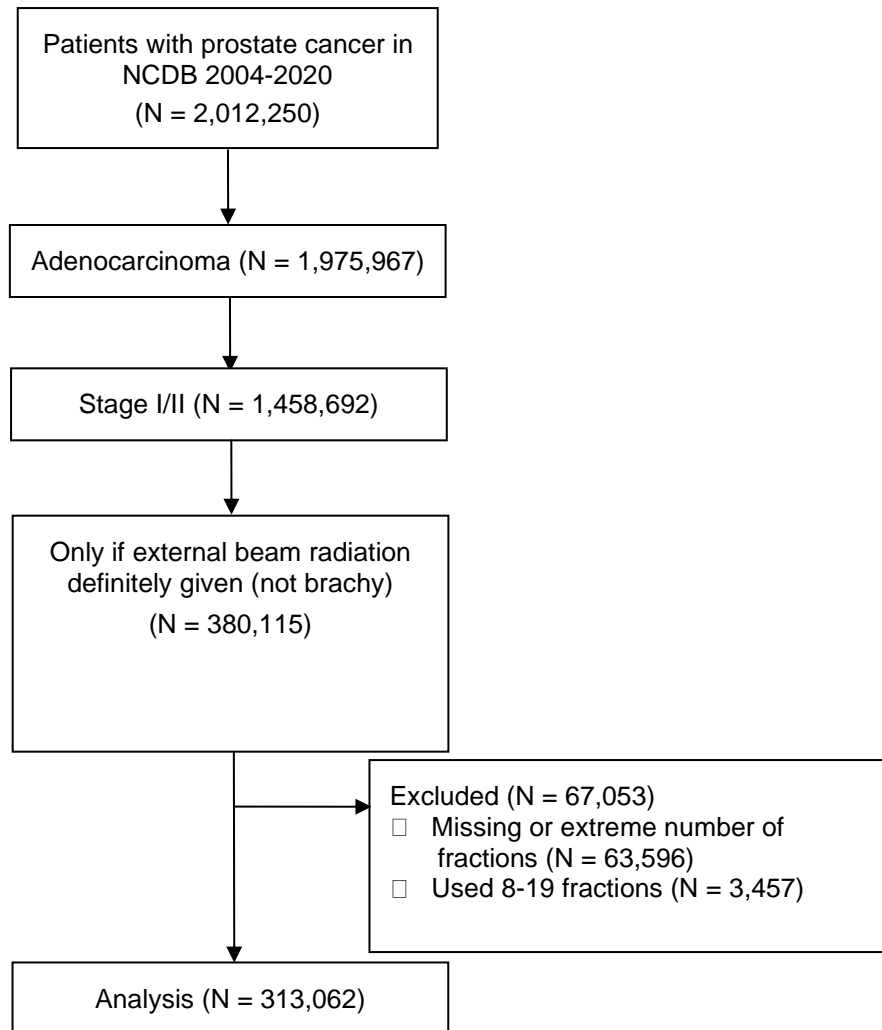
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This supplementary material has been provided by the authors to give readers additional information about their work.

**eFigure.** Selection of sample



**eTable 1.** Rates of fractionation categories overall by year of diagnosis

<b>Year of Diagnosis</b>	<b>Ultra-hypo-fractionation (%)</b>	<b>Moderate-hypo-fractionation (%)</b>	<b>Conventional fractionation (%)</b>
<b>2004</b>	2	21.98	76.02
<b>2005</b>	2.19	21.47	76.34
<b>2006</b>	3.45	19.15	77.41
<b>2007</b>	4.92	17.86	77.23
<b>2008</b>	5.74	16.51	77.75
<b>2009</b>	5.85	16.3	77.85
<b>2010</b>	6.29	15.1	78.61
<b>2011</b>	6.65	15.12	78.23
<b>2012</b>	7.76	14.32	77.92
<b>2013</b>	9.35	14.32	76.33
<b>2014</b>	9.59	14.43	75.99
<b>2015</b>	10.59	15.98	73.43
<b>2016</b>	12.34	19.82	67.84
<b>2017</b>	13.09	26.06	60.84
<b>2018</b>	16.1	27.88	56.02
<b>2019</b>	17.94	36.1	45.96
<b>2020</b>	18.33	45.02	36.65

**eTable 2.** Fractionation categories by risk grouping and year

NCCN Risk Group	Year of Diagnosis	Ultra-hypo-fractionation (%)	Moderate-hypo-fractionation (%)	Conventional fractionation (%)
Low	2004	1.62	14.98	83.4
Low	2005	2.26	13.75	83.98
Low	2006	5.32	12.85	81.83
Low	2007	7.32	11.8	80.88
Low	2008	8.68	11.24	80.08
Low	2009	8.18	10.94	80.88
Low	2010	11.34	8.45	80.22
Low	2011	12.37	8.37	79.25
Low	2012	14.76	6.79	78.45
Low	2013	18.96	6.99	74.05
Low	2014	18.32	7.06	74.62
Low	2015	23.09	5.81	71.1
Low	2016	27.16	10.6	62.24
Low	2017	30.9	15.78	53.32
Low	2018	30.55	22.14	47.32
Low	2019	33.05	29.65	37.3
Low	2020	37.76	33.99	28.26
Favorable Intermediate	2004	1.78	23.7	74.52
Favorable Intermediate	2005	2.06	22.93	75.01
Favorable Intermediate	2006	3.54	18.77	77.69
Favorable Intermediate	2007	4.88	17.89	77.23
Favorable Intermediate	2008	6.19	18.09	75.73
Favorable Intermediate	2009	7.1	15.88	77.02
Favorable Intermediate	2010	7.38	14.27	78.35
Favorable Intermediate	2011	8.53	13.59	77.88
Favorable Intermediate	2012	11.28	13.28	75.44
Favorable Intermediate	2013	13.06	13.1	73.84
Favorable Intermediate	2014	14.74	11.72	73.53
Favorable Intermediate	2015	16	13.23	70.77
Favorable Intermediate	2016	20.31	15.53	64.15
Favorable Intermediate	2017	22.41	23.93	53.66
Favorable Intermediate	2018	24.79	25.83	49.37
Favorable Intermediate	2019	27.37	34.4	38.23
Favorable Intermediate	2020	27.73	41.8	30.46
Unfavorable Intermediate	2004	2.21	26.75	71.05
Unfavorable Intermediate	2005	2.29	27.04	70.67
Unfavorable Intermediate	2006	2.82	23.71	73.48
Unfavorable Intermediate	2007	3.82	22.12	74.06
Unfavorable Intermediate	2008	4.49	19.72	75.79
Unfavorable Intermediate	2009	5.07	19.44	75.5
Unfavorable Intermediate	2010	5.1	18.58	76.32
Unfavorable Intermediate	2011	4.99	19.29	75.72
Unfavorable Intermediate	2012	6.69	16.75	76.56
Unfavorable Intermediate	2013	8.69	16.82	74.48
Unfavorable Intermediate	2014	9.32	16.84	73.84
Unfavorable Intermediate	2015	11.13	18.14	70.73
Unfavorable Intermediate	2016	13.04	21.76	65.19
Unfavorable Intermediate	2017	14	27.97	58.03
Unfavorable Intermediate	2018	15.23	30.19	54.58

<b>Unfavorable</b>	2019	16.79	39.45	43.75
<b>Intermediate</b>				
<b>Unfavorable</b>	2020	16.33	48.92	34.76
<b>Intermediate</b>				
<b>High</b>	2004	2.17	21.57	76.26
<b>High</b>	2005	2.22	22.42	75.36
<b>High</b>	2006	1.91	20.47	77.62
<b>High</b>	2007	2.98	18.83	78.2
<b>High</b>	2008	3.34	16.66	80
<b>High</b>	2009	3.76	17.64	78.6
<b>High</b>	2010	3.68	16.78	79.55
<b>High</b>	2011	3.58	16.34	80.08
<b>High</b>	2012	3.48	16.37	80.14
<b>High</b>	2013	3.91	15.89	80.2
<b>High</b>	2014	4.22	16.25	79.54
<b>High</b>	2015	3.45	18.4	78.15
<b>High</b>	2016	3.57	22.85	73.59
<b>High</b>	2017	3.69	27.65	68.66
<b>High</b>	2018	3.91	27.77	68.32
<b>High</b>	2019	4.2	33.38	62.43
<b>High</b>	2020	5.97	43.15	50.88

Abbreviations: NCCN, National Comprehensive Cancer Network



**eTable 4.** Full Multivariable Logistic Regression: Temporal effect on shorter course radiotherapy and ultra-hypofractionated radiotherapy use

Variables	Shorter Course Use			Ultra-hypofractionation Use <sup>†</sup>		
	Odds Ratios	95% CI	p	Odds Ratios	95% CI	p
Year of Diagnosis (Every 5 years change)	1.59	1.58-1.61	<0.001	2.16	2.13-2.20	<0.001
Age (Every 10 years older)	0.76	0.75-0.77	<0.001	0.88	0.86-0.90	<0.001
Rural vs.* Metro	0.94	0.88-1.01	0.091	1.11	0.97-1.26	0.132
Urban vs.* Metro	1.03	1.00-1.06	0.03	1.13	1.08-1.19	<0.001
African-American vs.* White	0.9	0.87-0.92	<0.001	0.78	0.75-0.81	<0.001
Asian/PI vs.* White	1	0.94-1.06	0.968	0.84	0.76-0.94	0.001
Native American vs.* White	1.23	1.03-1.48	0.025	2.37	1.83-3.07	<0.001
Other/Unrecorded vs.* White	0.98	0.91-1.04	0.467	0.88	0.79-0.97	0.013
Facility Location (East South Central vs.* East North Central)	1.64	1.57-1.72	<0.001	2.01	1.87-2.17	<0.001
Facility Location (Middle Atlantic vs.* East North Central)	1.48	1.43-1.52	<0.001	2.29	2.18-2.41	<0.001
Facility Location (Mountain vs.* East North Central)	1.96	1.86-2.07	<0.001	2.25	2.07-2.46	<0.001
Facility Location (New England vs.* East North Central)	0.54	0.51-0.56	<0.001	0.79	0.73-0.85	<0.001
Facility Location (Pacific vs.* East North Central)	1.22	1.18-1.26	<0.001	1.25	1.17-1.34	<0.001
Facility Location (South Atlantic vs.* East North Central)	1.67	1.62-1.72	<0.001	1.58	1.50-1.67	<0.001
Facility Location (West North Central vs.* East North Central)	1.14	1.09-1.19	<0.001	1.39	1.30-1.50	<0.001
Facility Location (West South Central vs.* East North Central)	0.8	0.76-0.84	<0.001	1.01	0.93-1.10	0.834
Median Income: ≥\$57,857+ vs.* ≤\$57,856	1.28	1.25-1.31	<0.001	1.52	1.47-1.58	<0.001
Insurance: Medicare vs.* Medicaid	1.49	1.41-1.57	<0.001	1.58	1.43-1.74	<0.001
Insurance: Not Insured vs.* Medicaid	0.92	0.83-1.02	0.113	1.16	0.97-1.39	0.115
Insurance: Other Government vs.* Medicaid	1	0.93-1.07	0.994	1.06	0.93-1.20	0.409
Insurance: Private Insurance / Managed Care vs.* Medicaid	1.54	1.45-1.62	<0.001	1.62	1.46-1.78	<0.001
Insurance: Unknown vs.* Medicaid	1.46	1.34-1.60	<0.001	2.35	2.06-2.70	<0.001
Facility Type: Community Cancer Program vs.* Academic/Research Program	0.54	0.52-0.56	<0.001	0.21	0.19-0.23	<0.001
Facility Type: Comprehensive Community Cancer Program vs.* Academic/Research Program	0.63	0.61-0.64	<0.001	0.46	0.45-0.48	<0.001
Facility Type: Integrated Network Cancer Program vs.* Academic/Research Program	0.81	0.79-0.83	<0.001	0.6	0.58-0.63	<0.001
Comorbidity Score: 1 vs.* 0	1	0.97-1.03	0.845	0.99	0.94-1.04	0.647
Comorbidity Score: 2 vs.* 0	0.94	0.89-0.99	0.026	0.78	0.71-0.86	<0.001
Comorbidity Score: 3 vs.* 0	1.02	0.95-1.10	0.624	0.61	0.54-0.70	<0.001
NCCN Low vs.* High Risk	1.06	1.03-1.09	<0.001	5.31	5.04-5.59	<0.001
NCCN Fav Intermediate vs.* High Risk	1.39	1.36-1.43	<0.001	3.9	3.71-4.09	<0.001
NCCN Unfav Intermediate vs.* High Risk	1.46	1.42-1.49	<0.001	2.41	2.30-2.53	<0.001

\*Reference value

<sup>†</sup> Comparison of ultra-hypofractionation versus all other standard forms of external beam radiotherapy (i.e. moderate-hypofractionation and conventional fractionation).

Abbreviations: NCCN, National Comprehensive Cancer Network; NCI, National Cancer Institute; Fav, favorable; unfav, unfavorable; PI, Pacific Islander.