Supplementary Online Content

Lu-Yao GL, Albertsen PC, Moore DF, et al. Fifteen-year survival outcomes following primary androgen-deprivation therapy for localized prostate cancer. *JAMA Intern Med*. Published online July 14, 2014. doi:10.1001/jamainternmed.2014.3028.

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

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eTable 1. Risk of Mortality According to Cancer Risk and Treatment for the Cox Multivariate and Instrumental Variable

	Primary ADT	Conservative Management				
Cancer Grade	Events/ Person-Year	Rate Per 100	Events/ Person-Year	Rate Per 100	Unadjusted HR (95% CI)	Adjusted HR (95% CI)
Conventional Cox Multivariate Results[a]						
Prostate cancer-specific mortality						
Moderately Differentiated	995/67316	1.5	1230/145443	0.8	1.79(1.65-1.95)	1.65(1.52-1.8)
Poorly Differentiated	1777/46572	3.8	993/36199	2.7	1.39(1.28-1.5)	1.37(1.27-1.49)
All localized	2837/119902	2.4	2438/219027	1.1	2.21(2.09-2.33)	1.53(1.45-1.63)
Overall mortality						
Moderately Differentiated	8037/76992	10.4	14182/173536	8.2	1.29(1.26-1.33)	1.20(1.16-1.23)
Poorly Differentiated	7868/56305	14	5233/45975	11.4	1.24(1.19-1.28)	1.16(1.12-1.21)
All localized	16589/139720	11.9	23212/259650	8.9	1.39(1.36-1.41)	1.19(1.17-1.22)
Instrumental Variable Analysis Results[b]						
Prostate cancer-specific mortality						
Moderately Differentiated	1189/114000	1	1036/98759	1	1.06(0.90-1.25)	0.99(0.86-1.16)
Poorly Differentiated	1440/41440	3.5	1330/41332	3.2	1.07(0.92-1.24)	1.04(0.91-1.19)
All localized	2608/172081	1.5	2667/166848	1.6	1.01(0.90-1.14)	0.98(0.88-1.09)
Overall mortality						
Moderately Differentiated	12153/133188	9.1	10066/117340	8.6	1.07(1.10-1.15)	1.01(0.96-1.07)
Poorly Differentiated	6693/51084	13.1	6408/51196	12.5	1.06(0.98-1.14)	1.04(0.98-1.10)
All localized	20037/204810	9.8	19764/194560	10.2	1.05(1.00-1.10)	1.02(0.98-1.07)

Abbreviation: ADT, primary androgen deprivation therapy; CI, confidence interval; HR, hazard ratio.

[a] Covariates included: age, race, comorbidity status, cancer stage, zip code income quartiles, zip code education quartiles, urban area, marital status, year of diagnosis, SEER (Surveillance, Epidemiology, and End Results) region, state buy-in status and cancer grade (all patients only). SEER region was not included in the instrumental variable analysis.

[b] High- and low-use areas corresponded to the above median and below median of Primary ADT utilization.

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eTable 2. Characteristics of Men With Localized Prostate Cancer in High-Use and Low-Use Primary ADT Health Service Areas [a]

	Moderately Differentiated		Poorly Differentiated		All Localized	
Characteristic	High N=20779	Low N=18527	High N=10825	Low N=10724	High N=34601	Low N=32116
Primary ADT within 180d, No (%)	7755(37.3%)	4533(24.5%)	6648(61.4%)	5325(49.7%)	15046(43.5%)	10079(31.4%)
Primary ADT within 18mo, No (%)	9329(44.9%)	5803(31.3%)	7777(71.8%)	6404(59.7%)	17948(51.9%)	12558(39.1%)
Duration of Primary ADT use, mean(SD),mo	54(44)	50(43)	43(33)	41(34)	50(40)	46(41)
Age at diagnosis, median (IQR), y	77(73,81)	77(72,81)	80(75,84)	79(74,84)	78(73,82)	77(73,82)
Zip code-level income, median(IQR), US $	45718 (34740,60950)	45924 (35720,58653)	42667 (33653,58154)	44999 (33680,56912)	44933 (34722,60646)	45057 (34655,56952)
Charlson Score, %						
0	13274(63.9%)	12890(69.6%)	6807(62.9%)	6715(62.6%)	22116(63.9%)	21508(67.0%)
1	4568(22.0%)	3600(19.4%)	2361(21.8%)	2361(22.0%)	7500(21.7%)	6580(20.5%)
2+	2937(14.1%)	2037(11.0%)	1657(15.3%)	1648(15.4%)	4985(14.4%)	4028(12.5%)
Clinical stage T1, No. (%)	9643(46.4%)	8843(47.7%)	4488(41.5%)	4010(37.4%)	16534(47.8%)	14068(43.8%)
PSA, mean	9.5(11.2)	9.5(11.9)	20.2(24.2)	17.7(21.4)	14.5(19.0)	13.7(18.1)
Gleason Score, %						
2-6	6373(30.7%)	6729(36.3%)	NA	NA	7414(21.4%)	6061(18.9%)
7	NA	NA	3871(35.8%)	4045(37.7%)	4162(12.0%)	3754(11.7%)
8+	NA	NA	2252(20.8%)	2069(19.3%)	2358(6.8%)	1963(6.1%)

Abbreviations: ADT, primary androgen deprivation therapy; IQR, interquartile range; SD, stand deviation; PSA, prostate-specific antigen.

[a]See Table 1 for explanations of Charlson score and clinical stage tumor (T1). High- and low-use areas corresponded to the above median and below median of Primary ADT utilization.

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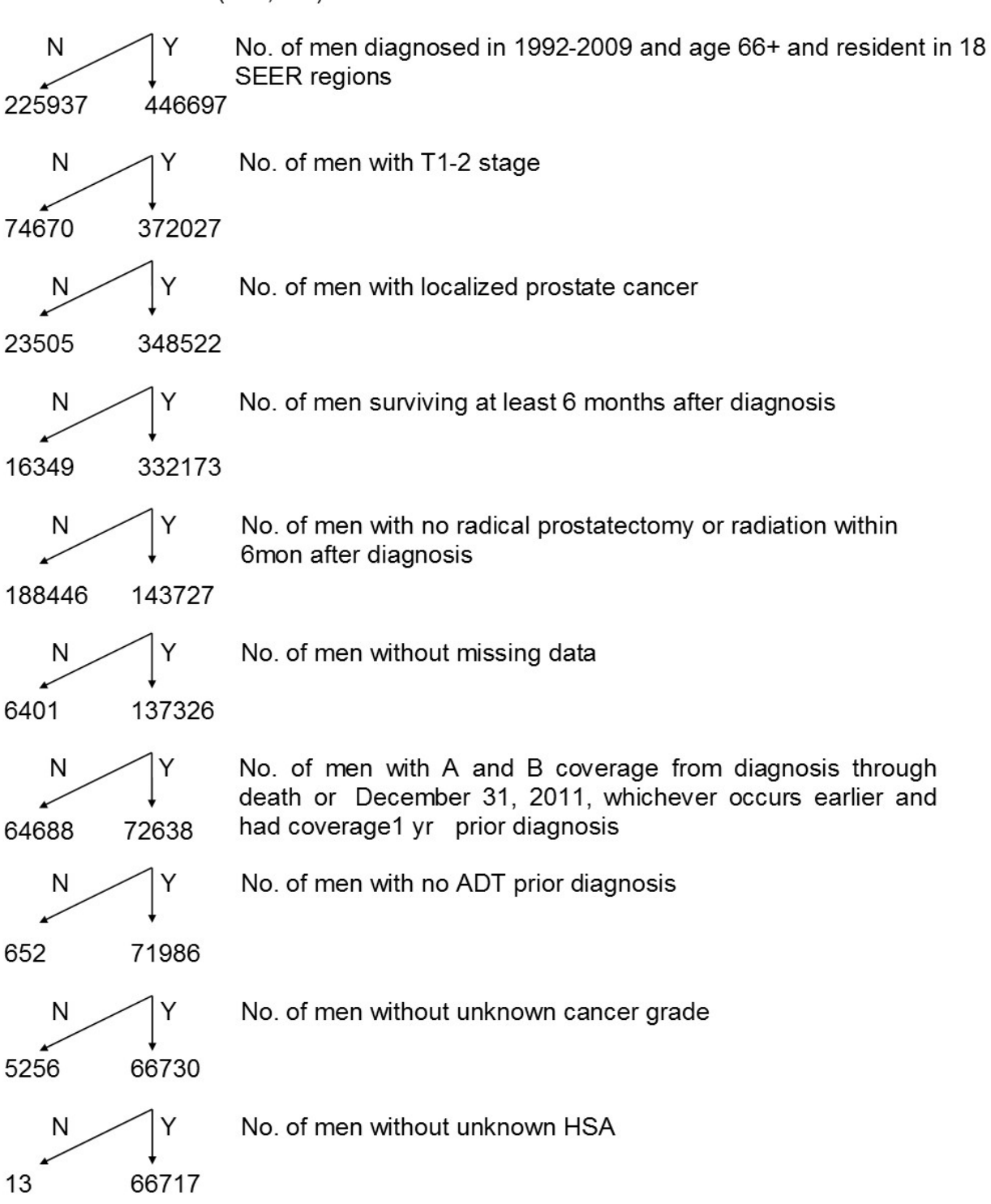
eFigure 1. Creation of Study Population



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