

Cancer Survival in Southwestern American Indians and Non-Hispanic Whites, 1990-1994 & 2000-2004

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Background and Specific Aims

Results from previous studies have shown that American Indians (AI) with cancer have poor survival compared to other populations. However, few reports have characterized temporal changes in survival among AI populations. The purpose of this research was to analyze data from population-based New Mexico Tumor Registry (NMTR) to characterize trends in cancer survival in AI and Non-Hispanic Whites (NHW) in the southwestern U.S.

The specific aim of this study was to observe and compare cancer cause-specific survival rates between AI and NHW diagnosed in 1990-1994 and 2000-2004.

H1: Survival rates will show improvement over time for both AIs and NHWs.

H2: AI have poorer survivorship from cancer than NHW.

Methods

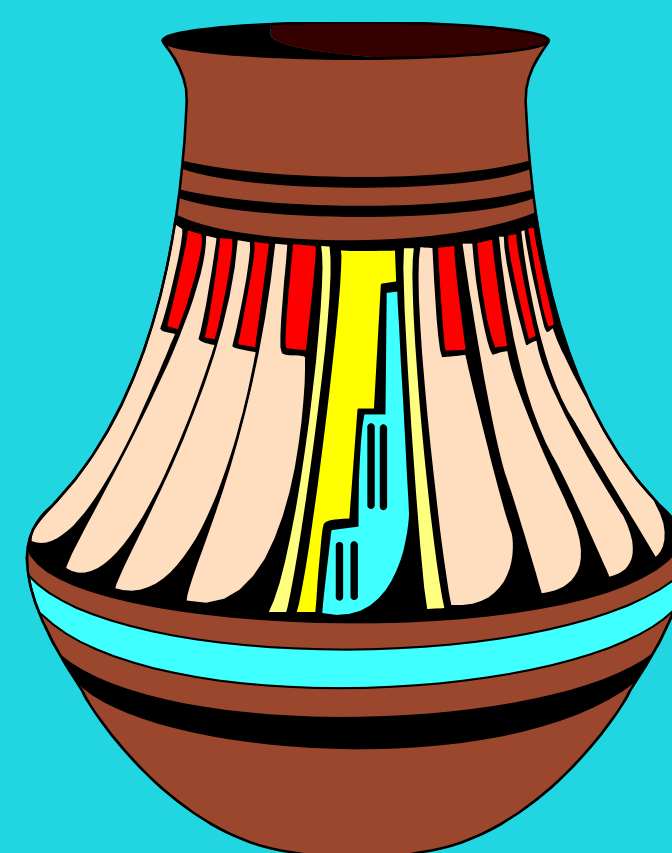
- We examined incident cases of female breast, prostate, colo-rectal, lung, and cervical cancer from the NMTR.
- Sample included all NHW and AI from New Mexico, and AI from Arizona.
- We compared survival from 1990-1994 and 2000-2004

Analysis

- Kaplan and Meier Product-Limit Estimation
- Cox Proportional Hazards Model
- Controlled for stage at diagnosis, age, urban or rural residency, time period of diagnosis, sex

Demographic Characteristics

	Female Breast		Prostate Gland		Lung and Bronchus		Colon and Rectum	
	AI (n=616)	NHW (n=5626)	AI (n=509)	NHW (n=7650)	AI (n=195)	NHW (n=3992)	AI (n=418)	NHW (n=3519)
<u>Age</u>	%	%	%	%	%	%	%	%
< 64	75	55	31	29	43	35	59	34
<u>Year of Diagnosis</u>								
1990-1994	36	45	45	50	34	47	36	46
2000-2004	64	55	55	50	66	53	64	54
<u>Urban Residency</u>	27	47	22	41	34	35	26	39
<u>Stage at Diagnosis</u>								
Local stage	56	66	75	83	21	21	28	39
Regional/Dis	44	34	24	17	79	79	72	61
tant								
Unknown	3	2	5	2	15	6	8	3



Results

Figure 1

H1: Survival rates will show improvement over time for both AI and NHW

Prostate: significant change showing improvement over time (HR= 0.49, 95% CI =0.3,0.8)

Breast, Lung Colorectal: Trend to better survival in later time period but not statistically significant.

Uterine Cervix: No change over time

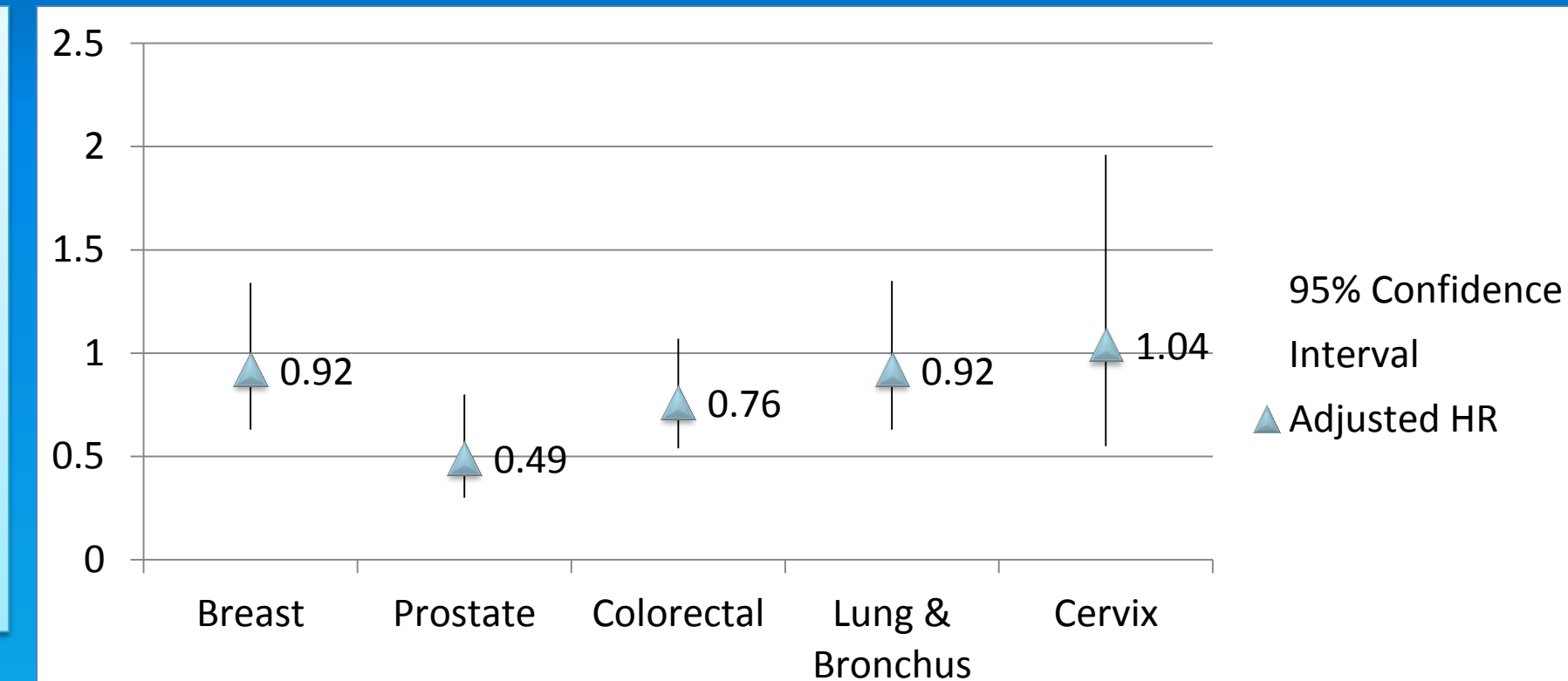


Figure 2

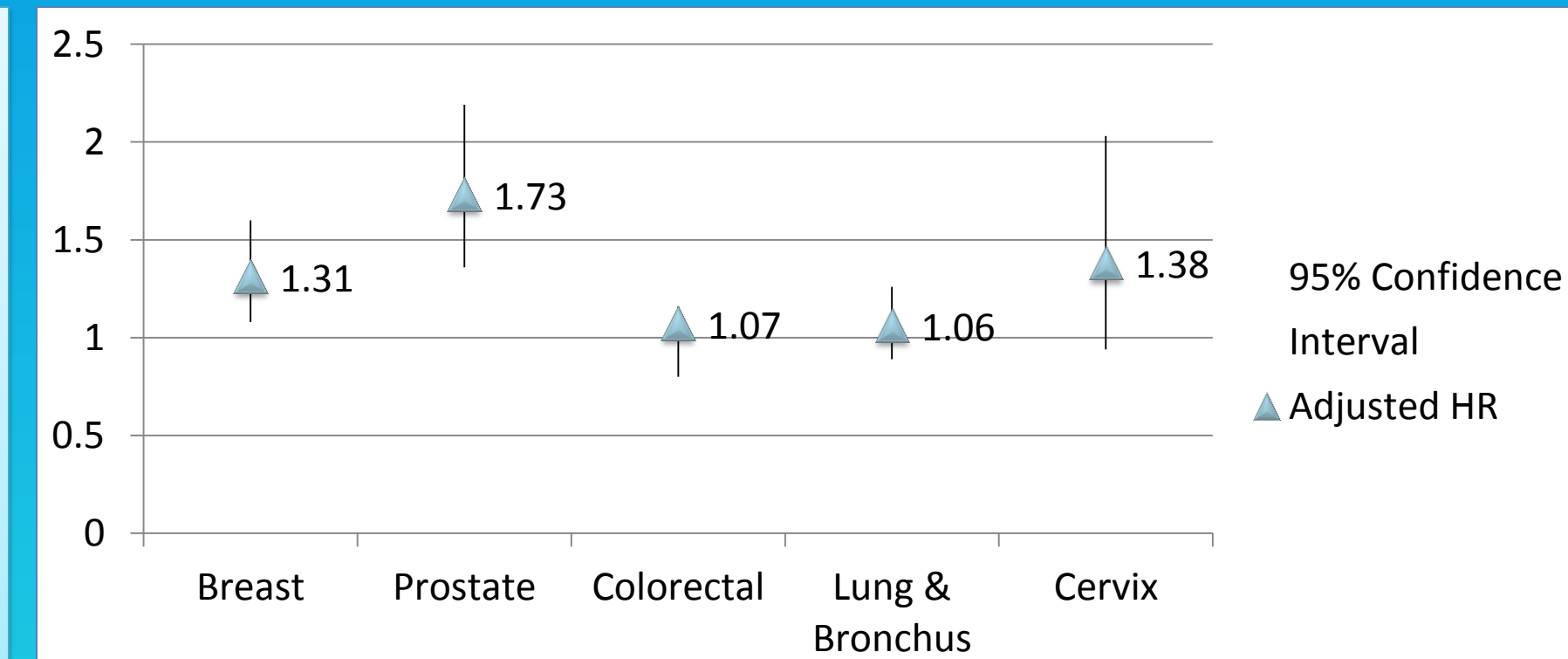
H2: AI have poorer survivorship from cancer than NHW.

Prostate: AI are 73% more likely to die from their prostate cancer (HR = 1.73, 95% CI = 1.4,2.2)

Breast: AI are 31% more likely to die from their breast cancer (HR = 1.31, 95% CI = 1.1, 1.6)

Lung and Colorectal: No change in survival

Uterine Cervix: Trending to poorer survival but not statistically significant.



Discussion

- Prostate cancer data periods reflect the peak and subsequent decrease in diagnoses after PSA test introduction
- Need to look at differences in stage at diagnosis between AI and NHW
- Hoping to see more improvement in outcomes for AI in comparison to earlier analyses

Conclusion

- Screenable cancer outcomes have improved over time, although not always statistically significant
- Cancer survival disparities continue to persist in Southwestern AI

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