2019 NPCR OHIO SUCCESS STORY

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Incorporating Survival Analysis into Cancer Reporting and Program Planning

NATIONAL PROGRAM OF CANCER REGISTRIES SUCCESS STORY

SUMMARY: Ohio has developed the capacity to conduct survival analysis and include survival data in cancer reports by incorporating passive follow-up into registry operations. Cancer survival data are useful when developing, implementing and evaluating cancer control programs.

CHALLENGE: Population-based cancer survival is a key measure of the overall effectiveness of the health care system. Cancer survival cannot be accurately measured without patient follow-up to determine vital status. Higher level analytic capability is necessary to accurately report cancer survival statistics.

SOLUTION: The Ohio Cancer Incidence Surveillance System (OCISS) does not have the resources to conduct active follow-up. Passive follow-up that includes linkages with Vital Statistics (VS), Social Security Death Index (SSDI) and the National Death Index (NDI) has been found to be a viable option. Although OCISS had regularly conducted linkages with both VS and SSDI data, NDI linkage is much more complicated. OCISS attended trainings coordinated by the Kentucky Cancer Registry to learn how to conduct NDI linkages. This in-depth training opportunity provided the tools for OCISS to conduct its first, and now annual, NDI linkages.

OCISS analytic staff subsequently calculated relative survival using SEER*Stat software version 8.3.5, with assistance from the National Cancer Institute's Surveillance, Epidemiology and End Results (SEER) Program technical support. The OCISS database was used in the analyses in SEER*Stat, employing selection criteria that were consistent, as close as possible, with SEER survival analyses.

RESULTS: OCISS epidemiologists initially conducted NDI linkages with OCISS data for diagnosis years 2001-2010. Since that time, OCISS has conducted additional NDI linkages so that all data back to our reference year (1996) have been linked with NDI data. We now routinely send all new case reports for NDI linkage after we complete VS and SSDI linkages.

Procedures have been developed, including evaluation of linkage methodology, to strike an appropriate balance of sensitivity as well as specificity in linking case reports to the correct death information. OCISS has also incorporated into its data quality efforts the review of all cancer cases for which the case would now be over 100 years of age (regardless of age at diagnosis). This has allowed us to identify persons who are now deceased but for whom vital status had not been previously updated.

Our analytic team recently produced Cancer Survival in Ohio. Ohio's five-year relative survival for all cancer sites/types combined (66.0 percent) was found to be statistically significantly lower than that of the United States (67.1 percent) for cancer cases diagnosed from 2009 to 2015 with follow-up through December 2016. For most cancer sites/types, the five-year relative survival in Ohio was similar to that of the United States.

Two of the latest site profiles: bladder cancer and stomach cancer (April 2019) also included Ohio survival data for Ohio cases diagnosed in 2009-2015.

SUSTAINING SUCCESS: OCISS has added a full-time epidemiologist to its cancer registry team; previously the registry only had a part time epidemiologist to handle data requests and conduct data linkages.

The OCISS analytic team now routinely includes survival analysis results in all reports that they produce. They have worked with their academic colleagues so that they are all using SEER*Stat survival sessions in a similar manner and all analyses can be replicated.

ODH receives funding from the CDC Cancer Prevention and Control Programs for State, Territorial and Tribal Organizations. The Comprehensive Cancer Control Program (CCCP) is required to submit a work plan each year that includes priorities established using cancer incidence and mortality data. The CCCP program uses OCISS data to establish baselines and targets. New this fiscal year is a survivorship supplement. Cancer survivor needs will be monitored using Behavioral Risk Factor Surveillance System data and by partnering with a health system to use electronic health record data for survivorship care planning. OCISS cancer survivorship data will aid in directing and evaluating activities in this newly-funded CDC Cancer Survivorship cooperative agreement.

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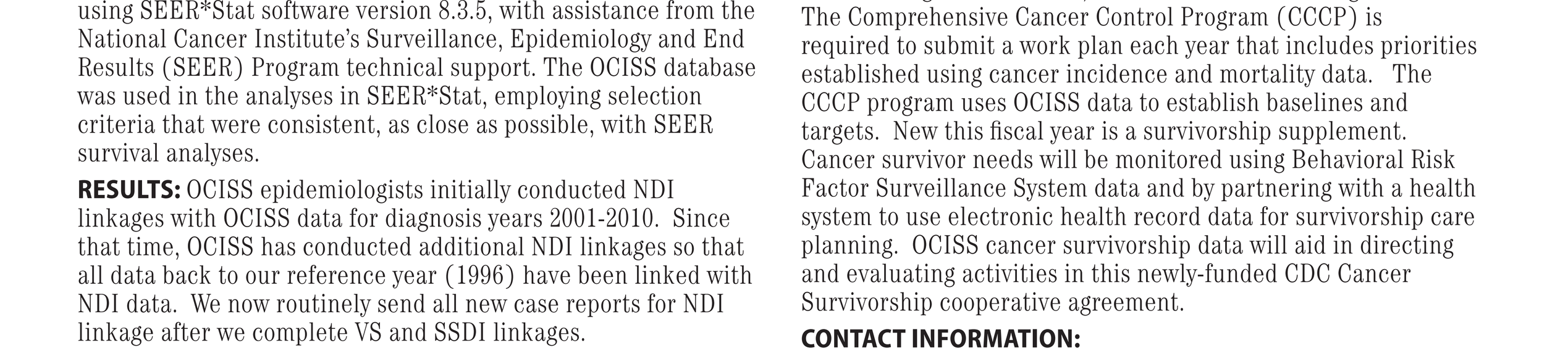
https://odh.ohio.gov/wps/portal/gov/odh/know-our-programs/ohio-cancer-incidence-surveillance-system/welcome-to



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