Supplemental Table: Characteristics and findings of seven completed NIOSH Health Hazard Evaluations (HHEs) determined to be cancer clusters — United States, 2001–2020.

Year	Industry Sector	Exposure of concern	Cancer sites (number of cases)	Investigative procedures	Individual cluster determinations made by investigators	Conclusion and recommendations from the final documentation*
2002	Public Administration	Unknown	Brain (unknown)	Unknown	Unknown	Preliminary investigation suggested that brain cancers might be in excess, but the data were insufficient to draw a firm conclusion. Investigators recommended that the company hire a consultant to conduct a cohort mortality study given the large scope of concern.
2003	Educational Services	Radon (from past industrial or mining operations)	Lung, Melanoma, Kidney, Blood, Breast, Uterine, Pancreas (12 total)	Record review	Unusual distribution of cancer	Multiple types of cancers and the lack of a unifying occupational exposure in the workplace led investigators to conclude the cancers were not likely related to an occupational exposure. No recommendations were made.
2008	Healthcare and Social Assistance	Ionizing radiation	Thyroid (5)	Rate calculations, record review	Excess cancer cases, unusual distribution of cancer, and presence of an exposure	Cases of papillary thyroid cancer could not be definitively linked to the suspected exposure (ionizing radiation). Investigators determined the risk of developing thyroid cancer among employees exposed to ionizing radiation appeared to be minimal. The cases of thyroid cancer might have been a coincidental occurrence or represent exposure to an unrecognized causative agent. Investigators recommended strengthening the radiation safety program and conducting further radiation monitoring.
2008	Mining	Unknown	Blood (3)	Record review	Unusual distribution of cancer	Three cases of hairy cell leukemia among mine workers were determined to be usual. Investigators concluded there was no agent known to cause hairy cell leukemia, and there was not an occupational exposure that could be definitively linked to the cases. Investigators recommended monitoring, employee education on risk factors for cancer, and cancer screening if warranted.†
2009	Healthcare and Social Assistance	Unknown	Brain (3)	Rate calculations	Excess cancer cases and unusual distribution of cancer	Investigators concluded that the cases of astrocytoma were a cluster. However, they did not believe that their occurrence was associated with workplace exposures because not enough time had passed between workplace exposure to a carcinogen and the growth of the brain cancers (latency), and there were no exposures known to be associated with increased brain cancer risk. No recommendations were made.
2011	Healthcare and Social Assistance	Unknown	Kidney (3)	Record review	Unusual distribution of cancer	While the occurrence of three cases of renal cell carcinoma among employees in a 2-year period was unusual, investigators concluded the cases of renal cell carcinoma were likely coincidental because there was a lack of common exposure or exposure to a known

* Final documentation for HHEs were unpublished, except as noted.

† Aristeguieta C, de Perio MA. Three cases of hairy cell leukemia in coal miners. *Leukemia & Lymphoma*. 2011/12/01 2011;52(12):2391-2392. doi:10.3109/10428194.2011.610011

						carcinogen at work. Investigators recommended that the workplace encourage employees to learn about their risk factors for cancer, measures they could take to reduce their risk for preventable cancers, and availability of cancer screening programs for some types of cancer.
2017	Manufacturing	Unknown	Brain (3)	Record review	Excess cancer cases and unusual distribution of cancer	Investigators concluded that the three cases of glioblastoma could not be linked to an occupational exposure. Investigators recommended that the workplace encourage employees to learn about their risk factors for cancer, measures they could take to reduce their risk for preventable cancers, and availability of cancer screening programs for some types of cancer.