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New Bedford Kidney Cancer Follow-up Investigation

- 1. Q. Why did the Massachusetts Department of Public Health (MDPH) recommend conducting a follow-up study of the people diagnosed with kidney cancer in the South End of New Bedford?**
 - A.** The results of the previous MDPH cancer study indicated that most of the cancer types evaluated occurred at or near the expected rates during 1982 through 1998 in New Bedford with the exception of kidney cancer. The study results showed a concentration of five individuals with kidney cancer living in close proximity to the Rodney Metals and Brittany Dye facilities. At the time of the investigation, MDPH did not have enough information about important risk factors for the disease, such as family medical history, occupational exposure, and history of smoking, making it difficult to assess the role that environmental exposures may have played in the development of kidney cancer.

- 2. Q. What additional information did the MDPH gather for this follow-up study?**
 - A.** MDPH conducted personal interviews and reviewed medical records. The personal interviews were conducted to help identify the prevalence of known or suspected risk factors among the individuals diagnosed with kidney cancer and to help determine whether it is more or less likely that environmental factors related to the two facilities may have played a role in their diagnosis. MDPH reviewed medical records to obtain supplemental information on factors possibly associated with their diagnosis of kidney cancer.

- 3. Q. Who was included in the follow-up study?**
 - A.** All of the individuals diagnosed with kidney cancer who lived in census tract 6528 (the South End) of New Bedford and who were reported to the Massachusetts Cancer Registry since 1982 were contacted and asked to participate in the study. Twelve people were identified for the first study. Three

more residents diagnosed with kidney cancer since 2003 were identified and also included in this follow-up.

4. Q. How many people participated in the follow-up study?

A. MDPH conducted the follow-up study to give the South End residents with kidney cancer or their families (who provided consent) opportunities to be personally interviewed and to have their medical records reviewed. Fifteen people were contacted and asked to participate in the study. After four rounds of recruitment mailings, 12 of the 15 people (80%) provided a response to our request for participation. Eight of the 12 agreed to an interview and gave permission for MDPH to review their medical records. Four individuals (or next of kin/representative family members) made it clear that they did not want to participate in the interviews. For that reason, MDPH obtained some supplemental, but limited, information about these individuals and the three others who did not respond to the recruitment mailings or who declined to participate. The supplemental information was obtained from the Massachusetts Cancer Registry, death certificates, and town residence lists.

5. Q. What type of information did MDPH gather through the interviews and medical records reviews?

A. The participants were asked about their kidney cancer diagnosis (e.g., onset of symptoms, date of diagnosis), medical history, residential history, occupational history, lifestyle habits (including smoking history), and family history of cancer. Most of the questions focused on known or suspected risk factors for kidney cancer. An occupational/environmental health physician working for the MDPH Center for Environmental Health (CEH) reviewed the medical records to verify that information obtained from the interviews was consistent with the medical records of the individuals and to identify any other information specific to the cancer diagnoses of these individuals.

6. Q. What are some of the known risk factors associated with kidney cancer that were considered in this follow-up study?

A. Some studies have shown an increased risk of kidney cancer in jobs where workers are exposed to organic solvents including a chemical called trichloroethylene (TCE). The known or suspected medical risk factors associated with kidney cancer are smoking, hypertension, obesity, use of diuretics, advanced kidney disease, ionizing radiation, family history of kidney cancer, and an inherited medical condition called von Hippell-Lindau disease.

7. Q. Do the results of this follow-up investigation suggest that Rodney Metals and Brittany Dye played a major role in the development of kidney cancer among South End residents?

A. The existence of other risk factors known to be linked to kidney cancer (e.g., smoking, occupational exposure to chemicals, family history of kidney cancer) among the individuals living in close proximity to the two companies makes it less likely that environmental exposures played a primary role in the development of kidney cancer. However, because most of the 15 individuals were long-time residents of the area, the possible role of an environmental exposure cannot be ruled out as a contributing factor in the development of kidney cancer among those living near the two facilities.

8. Q. What did MDPH learn about the presence of known or suspected risk factors for kidney cancer among the individuals that were included in the follow-up study?

A. Among South End residents diagnosed with kidney cancer—

- § Twelve of the 15 South End residents with kidney cancer had at least one known or suspected kidney cancer risk factor other than age, and of these, eight had more than one. One individual was confirmed as having no known or suspected kidney cancer risk factors other than age.
- § Ages at diagnosis ranged from 48 to 80 years, which is consistent with the established age pattern for this cancer type.
- § Based on all the information reviewed (i.e., interviews, the Massachusetts Cancer Registry, death records, and city resident lists), occupational exposures to chemicals/solvents related to an increased risk of kidney cancer may have been possible for eight individuals.
- § Seven individuals reported a history of medical conditions identified as risk factors for developing kidney cancer.
- § One individual received radiation therapy to treat a cancer prior to their kidney cancer diagnosis.
- § Three individuals had a known family history of kidney cancer.
- § Six individuals were current or former smokers at the time of diagnosis, five were reported as non-smokers, and smoking history was unknown for the remaining four individuals.
- § When risk factor information was considered with respect to place of residence, individuals who lived in closer proximity to the Rodney Metals and Brittany Dye facilities (i.e., within approximately a quarter of a mile) did not appear to have fewer kidney cancer risk factors compared with those who lived farther away.

9. Q. Will the MDPH continue to evaluate the pattern of kidney cancer in the South End area of New Bedford?

A. The MDPH recommends no further follow-up regarding kidney cancer among the 15 South End residents at this time. However, the MDPH will continue to monitor the number of cases of kidney cancer for New Bedford that are reported to the Massachusetts Cancer Registry each year.

10. Q. Is TCE still being emitted from Rodney Metals and Brittany Dye facilities?

A. Rodney Metals discontinued the use of TCE in 1982, and Brittany Dye discontinued use of TCE just prior to the release of the 2003 cancer incidence report. MDPH supports continuing efforts of the Massachusetts Department of Environmental Protection to help minimize the impacts of the emissions from Rodney Metals and Brittany Dye on the local community.

11. Q. Where can I obtain a copy of the 2005 *New Bedford Kidney Cancer Follow-up Study* or the 2003 *Health Consultation Assessment of Environmental Concerns: Rodney Metals and Brittany Dyeing and Printing Corporation and Evaluation of Cancer Incidence in New Bedford's South End, 1982-1998*?

A. Both reports are available on the MDPH, CEH Web site at <http://www.mass.gov/dph/ceh> . In addition, copies of both reports are available at the New Bedford Free Public Library (main library).

12. Q. Whom should I contact for more information?

A. For more information contact:
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Center for Environmental Health
Attn: Community Assessment Program
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<http://www.mass.gov/dph/ceh>