Factors Associated With Interview Completion Rates in a Surveillance Study of Osteosarcoma and Antecedent Exposures

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ABSTRACT

Background: Implementation of a case surveillance study to detect antecedent exposures in a rare cancer requires sufficient case identification and accurate exposure ascertainment. This study describes the design and implementation of a telephone interview portion of a 10-year safety surveillance study to monitor for the possibility of a trend signaling a possible association between teriparatide, an injectable treatment for osteoporosis, and adult osteosarcoma, a rare cancer occurring at a rate of approximately 3–5 cases per million population per year.

Methods: Incident cases of histologically confirmed adult osteosarcoma diagnosed on or after January 1, 2003 are identified through cancer registries. Patients or their proxies are interviewed by telephone for osteosarcoma risk factors and selected exposure. Cases can only be interviewed if all central and local requirements for consent (which can vary greatly) are met. To evaluate factors related to interview rate, we examined the percent interviewed among total eligible to be interviewed by time from diagnosis to time patient was eligible for telephone contact, as well as vital status at time of registry reporting.

Results: The 14 participating registries historically capture approximately half of all adult US osteosarcoma cases. Between June 2004 and December 2006, 430 cases were identified. 303 cases diagnosed in 2003–2005 were eligible for telephone contact. Of these cases, 123 were interviewed. There were no differences in demographic characteristics between patients interviewed and patients not interviewed. The interview rate for cases who were eligible for telephone contact in <12 months, 12–24 months, or >24 months, or <4, months, 4–8 months, and 8–12 months, were 48%, 38%, and 34%, respectively. The interview rate by vital status at time of registry reporting was 48% if alive and 20% if deceased.

Conclusions: Targeted enrollment of a subset of state cancer registries and comprehensive cancer center registries allowed us to identify more than half of US adult osteosarcoma cases. Shorter time between diagnosis and ability to contact patients is associated with a substantially higher interview success rate.

CONFLICT OF INTEREST

Eli Lilly and Company and RTI Health Solutions (RTI-HS) employees contributed significantly to the design and analytic plan for this study. Employees of RTI-HS, a nonprofit research organization, are collecting and analyzing data. Eli Lilly and Company is fully funding the Osteosarcoma Surveillance Study. RTI-HS has an independent right to publish.

BACKGROUND

Osteosarcoma Safety Surveillance Study

A 10-year safety surveillance study was initiated to monitor for the possibility of a trend signaling a possible association between teriparatide, an injectable treatment for osteoporosis, and adult osteosarcoma, a rare cancer occurring at a rate of 3–5 cases per million population per year.

Study Objectives

Primary

To identify approximately 40% of all newly diagnosed cases of osteosarcoma in men and women aged 40 years and older in the US, for a duration of at least 10 years;

Secondary

To systematically collect, for descriptive epidemiology purposes, additional patient information, including demographic, other treatment, relevant exposures, and treatment conditions in this large series of individuals with osteosarcoma.

Study Procedures

After obtaining registry approval, RTI-HS identifies patients through select state, regional, and medical center cancer registries; reviews descriptive demographic and cancer information from the registry; obtains patient consent; and conducts telephone interviews with patient or proxy to ascertain treatment, relevant exposures, and consent conditions.

Conclusions:

- Canons are reported to state registries approximately 6 months after diagnosis.
- Lag time from diagnosis to registry release of data ranges from 6 to 18 months.

OBJECTIVE

To evaluate factors related to interview response rates of US osteosarcoma patients aged 40 years and older identified through the Osteosarcoma Safety Surveillance Study.

METHODS

Design

- Ad hoc descriptive analyses were conducted using data from the Osteosarcoma Safety Surveillance Study through April 2007.

Setting

US Osteology Referral Centers (interstate/county population-based cancer registries or comprehensive cancer center registries with high numbers of cases of adult osteosarcoma in the US that were participating in the Osteosarcoma Safety Surveillance Study as of April 2007 (Table 1). (Abstract presents data as of December 2006.)

- Ten state or regional central cancer registries to capture approximately half of all adult US osteosarcoma cases.

- Four comprehensive cancer center registries.

Main Measures

- Demographic profile (i.e., age, gender, race, ethnicity, and vital status) of interviewed versus all reported cases (Table 1);
- Average time lag from diagnosis to interview (Figure 2);
- Case status as of April 1, 2007 (Figure 3); overall response rate by year of diagnosis (Table 2);
- Percentage interviewed among total eligible to be interviewed by time from diagnosis to time patient was eligible for telephone contact (Figure 4);
- Percentage interviewed among total eligible to be interviewed by type of respondent, patient, or proxy (Figure 5).

RESULTS

Data presented are from ten registries actively contributing data as of April 2, 2007.

Table 1. Demographic Characteristics of Adult Osteosarcoma Patients Reported to the Osteosarcoma Safety Surveillance Study as of April 2, 2007

<table>
<thead>
<tr>
<th>Demographic Variable</th>
<th>Statistically Different (P Value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at diagnosis</td>
<td>Range (40-99)</td>
</tr>
<tr>
<td>Race</td>
<td>White (93%)</td>
</tr>
<tr>
<td>Gender</td>
<td>Female (50%)</td>
</tr>
<tr>
<td>Consent</td>
<td>Written (100%)</td>
</tr>
</tbody>
</table>

CONCLUSIONS

- Demographic profiles for interviewed and noninterviewed patients with osteosarcoma are similar; however, more interviews were completed either with patient or proxy if patient was alive at the time the case was reported to the registry.
- The closer the interview was conducted to the date of diagnosis, the higher the interview completion rate;
- Lower refusal rate was observed among patient respondents versus proxy respondents;
- For a long-term study of possible cancer risk using methods employed in this study, the lag time does not result in loss of cases; historical cases are maintained by ongoing registries. However, delays in case contact may lead to increased numbers of proxy interviews.
- Additional registries have been enrolled to meet the objective of interviewing 40% of all cases diagnosed in the US.