



FIGURE 10 Appearance times of bone sarcomas are grouped by five-year periods.

The marked dropoff in the number of bone sarcomas appearing 50 or more years after first exposure could well reflect the fact that few subjects with high intakes were still alive that long after exposure. All of the high intakes in the dial workers occurred before 1925. Since the average age of those entering the industry then was about 20 years, only workers surviving into their 70s would have appearance times greater than 50 years. Subjects who received radium medically often were considerably older than the dial workers. Therefore, 50 years after intake, they would have been in their 80s or 90s.

Figure 11 shows the relationship between time of appearance (diagnosis) of the bone sarcomas and the initial systemic intake. The initial systemic intake here is the sum of  $\mu\text{Ci}$  of  $^{226}\text{Ra}$  plus 2.5 times  $\mu\text{Ci}$  of  $^{228}\text{Ra}$ . The one point omitted from the plot in Figure 11 represents a bone sarcoma in a subject with an intake twice any of those plotted (6,331  $\mu\text{Ci}$ ). Diagnosed 7 years after first exposure to radium, this bone sarcoma occurred in the dial worker with the highest calculated intake of any radium case.