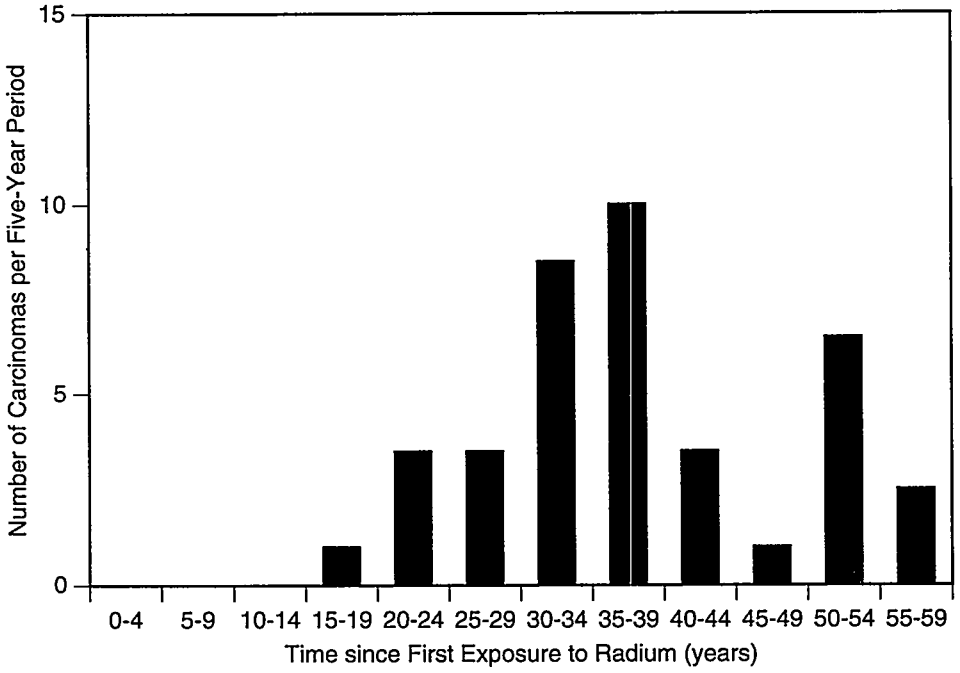

FIGURE 12 Appearance times for radium-induced head carcinomas are grouped by five-year periods.

redeposited. Thus, rapid growth would deplete radium from the body much faster than the radium retention functions, which are based on adult models, would predict. This principle is demonstrated by the results of measurements of the radium content of the older brother, Case 03-220, whose intake is listed as 83.73 μCi of ^{226}Ra. Thus, the two-year difference in age of the two brothers, who apparently received equal doses of radium, caused their intake values to differ by more than a factor of three. Even the value for the older brother is probably too low, but it may not be far from the true value. The quantity of radium given each day was probably about 1 μCi of ^{226}Ra, which would total 730 μCi in two years, resulting in an intake of 20% of 730 μCi or about 146 μCi. This case was discussed in some detail by Keane and Mays (1987).

Aside from this case, the carcinoma case at the next lowest dose is number 2,138 on the ranked list of 2,383 measured cases, with a value of 77.96 μCi of ^{226}Ra. The case at the highest dose is number 2,371, with an intake of 998.09 μCi of ^{226}Ra.