

## **ANNUAL HAZARD RATES OF MORTALITY AND RECURRENCE FROM PAPILLARY THYROID CARCINOMA: LESSONS FROM A LONG-TERM FOLLOW-UP**

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**Background/Purpose:** Little is known about annual hazard rates of cancer mortality and recurrence for papillary thyroid carcinoma (PTC).

**Methods:** A retrospective chart review was conducted on 482 patients with PTC who underwent curative initial surgery between April 1981 and December 1991 with a median follow-up of 18 years. Clinical characteristics and cancer mortality (primary endpoint) and recurrence (secondary endpoint) were ascertained. Time-distributions of the hazard rates were estimated for the entire study population and prognostic subgroups: 151 low-risk (T1N0M0), 160 intermediate, and 171 high-risk patients (T > 5 cm, clinical N1, extrathyroidal extension, or M1).

**Results:** Female/male ratio was 396/86. Age at the time of surgery ranged from 13 to 86 years old (median 46). Total and less than total thyroidectomy were carried out on 86 (18%) and 396 (82%) patients, respectively. Lateral neck dissection was performed on 435 (90%) patients. The hazard rate of cancer mortality for the entire population showed a double-peaked distribution with a first peak at the 10th year and a second peak reaching the maximum at the 20th year after surgery. The annual hazard curve of recurrence presented a triple-peaked pattern with surges at about 4, 13, and 20 years after surgery. The high-risk group carried sustained hazard rates for both cancer mortality and recurrence as compared with the low- or intermediate-risk groups.

**Discussion & Conclusion:** Patients with PTC showing at least one of the prognostic characteristics may be at sustained risk of cancer mortality and recurrence even 10 or more years after initial treatment.