

Risk categorization

Three level of risk stratification for the assessment of the risk of recurrence (table 3) recommended by the ATA [1] which may be useful to determine the frequency of follow-up and the level of TSH suppression.

Table 3. Risk categories for recurrent disease.

Low risk	Intermediate risk	High risk
<ul style="list-style-type: none"> Complete macroscopic resection No cervical lymph node metastasis (N0 disease) No distant metastasis No tumour invasion of loco-regional structures No aggressive histology or vascular invasion No I¹³¹ uptake outside the thyroid bed in the post-treatment I¹³¹ scan 	<ul style="list-style-type: none"> Microscopic invasion of tumour in the extra-thyroidal tissue N1 disease and cervical I¹³¹ uptake outside thyroid bed in the post-treatment I¹³¹ scan Tumour with aggressive histology or vascular invasion 	<ul style="list-style-type: none"> Macroscopic tumour invasion of local structures Incomplete surgical resection Distant metastasis High Tg level out of proportion to what is seen on post-treatment I¹³¹ scan

TSH suppression

- DTC expresses TSH receptor on cell membrane and responds to TSH stimulation by increasing the rates of cell growth.
- Supra-physiologic doses of levothyroxine (T4) are used to suppress the TSH production in the effort to reduce the risk of recurrence.
- Long term TSH suppression could be associated with increased risk of osteoporosis and cardiac arrhythmia.
- The level of TSH suppression in different risk categories recommended by ATA [1] is summarised in table 4.

Table 4. Level of TSH suppression recommended by ATA.

Risk category	Level of TSH suppression
Low risk Biochemically and clinically free of disease Including patients who have not had RAI ablation	0.3-2 mU/L
Intermediate risk Biochemically and clinically free of disease	0.3-2 mU/L
High risk Persistent disease Biochemically and clinically free of disease	< 0.1 mU/L indefinitely 0.1-0.5 mU/L for 5-10years