

Table S1. Search strategy in the systematic review

	Databases	Search Strategy	Finding
Search Strategy for Expression Studies	pubmed	((Cancer*) OR (Neoplasm*) OR (Carcinoma*) OR (Adenoma*) OR (Nodule*)) AND (Thyroid*) AND ((PDGFR*) OR (Platelet Derived Growth Factor receptor*) OR (CD140*))	139
	Web of science	((Cancer*) OR (Neoplasm*) OR (Carcinoma*) OR (Adenoma*) OR (Nodule*)) AND (Thyroid*) AND ((PDGFR*) OR (Platelet Derived Growth Factor receptor*) OR (CD140*))	179
	scopus	((Cancer*) OR (Neoplasm*) OR (Carcinoma*) OR (Adenoma*) OR (Nodule*)) AND (Thyroid*) AND ((PDGFR*) OR (Platelet Derived Growth Factor receptor*) OR (CD140*))	533
Search Strategy For Genetic Alteration Studies	pubmed	(((((Neoplasm*[Title/Abstract]) OR (Carcinoma*[Title/Abstract]) OR (Adenoma*[Title/Abstract]) OR (Nodule*[Title/Abstract]) AND (Thyroid*[Title/Abstract]) AND (((PDGFR*[Title/Abstract]) OR (Platelet Derived Growth Factor receptor*[Title/Abstract]) OR (CD140*[Title/Abstract])) AND (((((((((((((((Polymorphisms, Genetic[Title/Abstract]) OR (Gene Polymorphism[Title/Abstract]) OR (Gene Polymorphisms[Title/Abstract]) OR (Polymorphism, Gene[Title/Abstract]) OR (Polymorphisms, Gene[Title/Abstract]) OR (Polymorphism[Title/Abstract]) OR (Genetics[Title/Abstract]) OR (Polymorphisms[Title/Abstract]) OR (Genetics[Title/Abstract]) OR (Genetic Polymorphisms[Title/Abstract]) OR (Genetic Polymorphism[Title/Abstract]) OR (Genetic Variations[Title/Abstract]) OR (Variations, Genetic[Title/Abstract]) OR (Diversity, Genetic[Title/Abstract]) OR (Diversities, Genetic[Title/Abstract]) OR (Genetic Diversities[Title/Abstract]) OR (Genetic Diversity[Title/Abstract]) OR (Variation, Genetic[Title/Abstract]))))))))))))))))))	5
	Web of science	TS=(((((((Neoplasm*) OR (Carcinoma*) OR (Adenoma*) OR (Nodule*)) AND (Thyroid*)) AND (((PDGFR*) OR (Platelet Derived Growth Factor receptor*)) OR (CD140*))) AND (((((((((((((((Polymorphisms, Genetic) OR (Gene Polymorphism)) OR (Gene Polymorphisms)) OR (Polymorphism, Gene)) OR (Polymorphisms, Gene)) OR (Polymorphism)) OR (Genetics)) OR (Polymorphisms)) OR (Genetics)) OR (Genetic Polymorphisms)) OR (Genetic Polymorphism)) OR (Genetic Variations)) OR (Variations, Genetic)) OR (Diversity, Genetic)) OR (Diversities, Genetic)) OR (Genetic Diversities)) OR (Genetic Diversity)) OR (Variation, Genetic))	9
	scopus	KEY ((((((neoplasm*) OR (carcinoma*)) OR (adenoma*)) OR (nodule*)) AND (thyroid*)) AND (((pdgfr*) OR (platelet AND derived AND growth AND factor AND receptor*)) OR (cd140*))) AND ((((((((((((polymorphisms, AND genetic) OR (gene AND polymorphism)) OR (gene AND polymorphisms)) OR (polymorphism, AND gene)) OR (polymorphisms, AND gene)) OR (polymorphism)) OR (genetics)) OR (polymorphisms)) OR (genetics)) OR (genetic AND polymorphisms)) OR (genetic AND polymorphism)) OR (genetic AND variations)) OR (variations, AND genetic)) OR (diversity, AND genetic)) OR (diversities, AND genetic)) OR (genetic AND diversities)) OR (genetic AND diversity)) OR (variation, AND genetic)))	121

Table S2. The Reporting Recommendations for Tumor Marker Prognostic Studies (REMARK) criteria for all included studies

REMARK Criteria		Genetic Alternation Studies			Expression Studies								
		Cruz-Romero et al. (2024) ²⁰	Borowczyk et al. (2019) ²¹	Kim et al. (2012) ²²	Zhu et al. (2023) ²³	Shi et al. (2020) ²⁴	Adewuyi et al. (2018) ²⁵	Sun et al. (2016) ²⁶	Campistrous et al. (2016) ¹⁵	Lee et al. (2016) ²⁷	Zhang et al. (2012) ¹³	Durante et al. (2011) ²⁸	Elliott et al. (2008) ²⁹
INTRODUCTION	1. Introduction	1	0.5	1	1	1	1	1	1	1	1	1	1
	2. Patients	1	1	1	0.5	1	0.5	1	1	1	1	1	1
MATERIALS AND METHODS	3. Specimen characteristics	1	0	0	0	0	0	0	1	0	0	0	0
	4. Assay methods	1	1	1	1	1	1	1	1	1	1	1	1
	5. Study design	1	1	1	1	1	1	1	1	1	1	1	1
	6. Type of study, stratification/matching, time period and follow up	1	1	1	1	0	0.5	1	1	1	1	1	1
	7. Clinical endpoints	0	0	0.5	1	0	0	1	1	0	0	0	1
	8. Variables examined	1	0.5	1	1	1	1	1	1	1	1	1	1
	9. Sample size rationale	1	1	1	1	1	1	1	1	1	1	1	1
	10. Statistical methods	1	1	1	1	1	1	1	1	1	1	1	0
	11. How marker values were handled	1	1	1	1	1	1	1	1	1	1	1	1
	12. All patients accounted	0.5	1	1	1	1	1	1	1	1	1	1	1
RESULTS	13. Descriptive statistics	1	1	1	1	1	1	1	1	1	1	1	1
	14. Reaction of marker to prognostic variable	0	0	1	0	1	1	1	1	1	1	0	0
	15. Univariate analysis	0	0	0	0	1	1	1	1	1	1	1	0
	16. Multivariate analysis	0.5	0	1	1	0	0	1	0	0	0	0	0
	17. Estimated effects	0	0.5	1	0	1	1	1	0	0	1	0	0
	18. Further investigations	0	0	1	1	0	0	0	1	1	1	1	0
	19. Interpretation of results	1	1	1	1	1	1	1	1	1	1	1	1
DISCUSSION	20. Future directions	0.5	0.5	1	1	1	1	1	1	1	1	1	1
Total REMARK Score		14	12	18	16	15	15	18	18	16	17	15	13

