

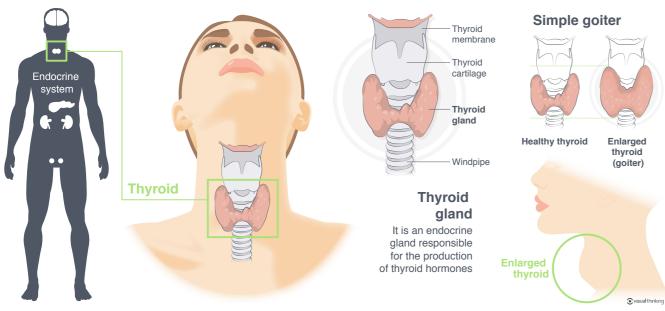
Nacional de Reaseguros S A

THYROID DISEASES

The thyroid gland is shaped like a butterfly and it's usually located on the front part of the neck. It produces two hormones: triiodothyronine (T3) and thyroxine (T4), which play a very important role in the metabolism of our body. The thyroid gland is controlled by the thyroid stimulating hormone (TSH), which is produced by the pituitary gland.

GOITER

A goiter is an abnormal enlargement of the thyroid gland.



GOITER

The term "goiter" simply refers to an abnormal enlargement of thyroid gland. It is important to know that the presence of a goiter does not necessarily indicate that the thyroid gland is malfunctioning.

Goiter can occur in a gland that is producing too much

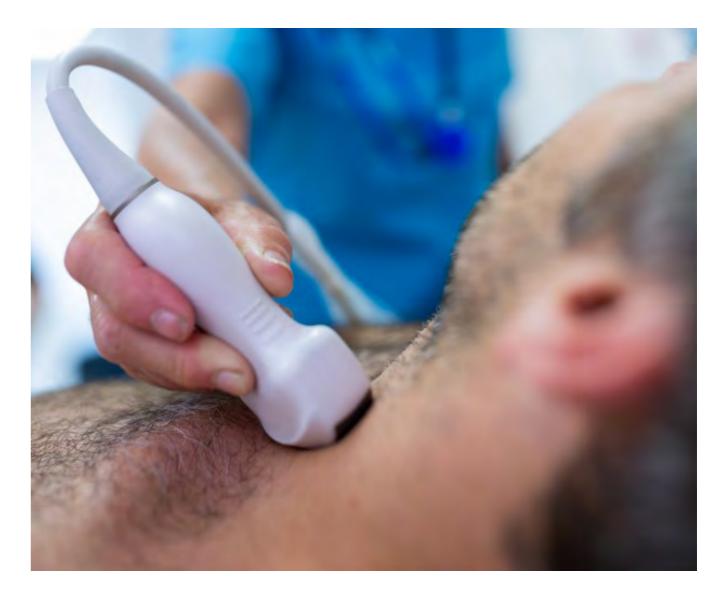
thyroid hormone (hyperthyroidism), little hormone (hypothyroidism) or the right amount (euthyroidism).

In insurance medicine, special attention should be paid to those cases in which there has been rapid growth or signs of compression, or in the event that the candidate is going to undergo thyroid surgery within a short period of time.

GOITER

	LIFE	DISABILITY	ACCIDENT	SHORT-TERM DISABILITY
Stable goiter without signs of compression	Standard	Standard	Standard	Standard
Rapid and recent growth or signs of compression	Postponement	Postponement	Standard	Postponement
Surgery in the near future	Postponement	Postponement	Standard	Postponement

Taken from DAVINCI risk selection tool



HYPOTHYROIDISM

Hypothyroidism is a disorder in which the thyroid gland produces less thyroid hormone than it should, the metabolism slows down and this leads to a variety of symptoms.

At first the symptoms may be unnoticeable, but over time they may become more obvious and serious. These include: fatigue (feeling tired), weight gain, constipation, loss of sexual desire, hair loss and dry skin.

The most common cause of hypothyroidism is an autoimmune disorder called Hashimoto's thyroiditis, which basically consists of our immune system mistakenly sending antibodies to destroy the cells of the thyroid gland. Hypothyroidism can also occur after thyroid surgery or treatment with iodine to treat hyperthyroidism.

HYPOTHYROIDISM

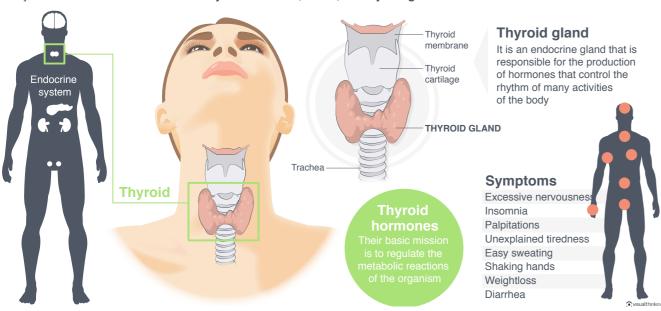
LIFE, DISABILITY, ACCIDENT AND SHORT-TERM DISABILITY

	LIFE	DISABILITY, ACCIDENT AND SHORT-TERM DISABILITY
Good hormone control	Standard	Standard
Poor hormone control	+25%	Standard

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HYPERTHYROIDISM

Any condition that causes too much thyroid hormone, that is, the thyroid gland is overactive



HYPERTHYROIDISM

The term "hyperthyroidism" refers to any condition in which there is too much thyroid hormone in the body.

The most frequent cause (in more than 70% of people) is the overproduction of thyroid hormone by the thyroid gland. This condition is also known as Graves' disease and is caused by antibodies that stimulate the thyroid gland to grow and secrete excess thyroid hormone. This type of hyperthyroidism is more frequent in young women.

Symptoms include nervousness, irritability, increased sweating, palpitations, trembling hands, anxiety, difficulty sleeping, thinning of the skin, thin and brittle hair, and muscle weakness, among others.

In the evaluation of the applicant, attention must be paid to

the control of the candidate and the time elapsed since the end of the treatment. On the other hand, it must be borne in mind that since it is an autoimmune disease, there may be other associated diseases, such as diabetes mellitus.

PRACTICAL CASE

A 37-year-old woman diagnosed with autoimmune hyperthyroidism 5 years ago, who followed pharmacological treatment for two years and is currently well-controlled, without the need for treatment. She does not have any other associated disease. She requests evaluation for life insurance.

Since she is in a current state of euthyroidism (normal thyroid hormones) and she has not been treated for more than six months, no extra premium should be applied.

HYPERTHYROIDISM

LIFE, DISABILITY, ACCIDENT AND SHORT-TERM DISABILITY

	VIDA	INVALIDEZ	ACCIDENTES	ILT
Current hyperthyroidism without control	Postponement	Postponement	Postponement	25%
End of acute treatment in last 6 months	+2 thousand for a year	Postponement	Postponement	25%
Good control	Normal	Postponement	Postponement	25%

Taken from DAVINCI risk selection tool

SOLITARY THYROID NODULE

Thyroid nodule refers to any abnormal growth of thyroid cells that form a tumor inside the thyroid. Although most thyroid nodules are benign, a small proportion of these are due to tumoral processes.

Most thyroid nodules do not cause any symptoms,

but a high percentage need some type of diagnostic evaluation.

They are usually discovered during a routine physical examination or in imaging studies such as a computerized axial tomography (CAT scan) or an ultrasound scan of the neck. Occasionally, patients may notice a lump in their neck.

PRACTICAL CASE

A 51-year-old man diagnosed of a thyroid nodule by ultrasound scan six years ago. Ultrasound scan follow up has not shown any significant changes with normal thyroid hormones levels. He request an evaluation for life and temporary disability

insurance.

This is a case of a thyroid nodule in euthyroid status (normal thyroid hormones) that does not require an additional extra premium for any of the guarantees requested.

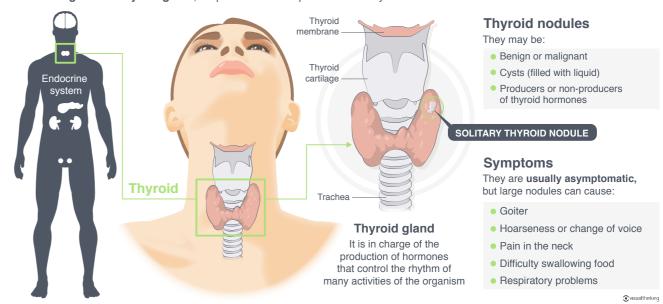
SOLITARY THYROID NODULE

	LIFE	DISABILITY	ACCIDENT	SHORT-TERM DISABILITY
Without research, in women between 20 and 50 years	+50% to +100%	+25% to +50%	Standard	25%
Appearance before the age of 20 or after the age of 50, in males	Postpone- ment	Postpone- ment	Standard	25%
Researched with biopsy in a satisfactory way	Standard	Standard	Standard	25%

Taken from DAVINCI risk selection tool

SOLITARY THYROID NODULE

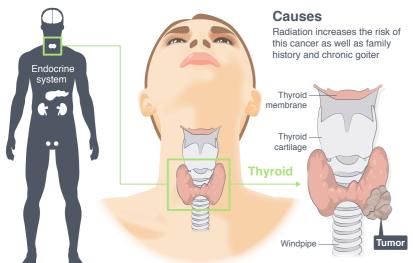
It is a bulge in the thyroid gland, responsible for the production of thyroid hormones



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THYROID CANCER

It is cancer that starts in the thyroid gland, which is located inside and in front of the lower part of the neck



Symptom

There are several types of thyroid cancer:

- Anaplastic carcinoma is the most dangerous form of thyroid cancer: uncommon and very aggressive
- Follicular carcinoma is more likely to reappear and spread
- Medullary carcinoma is a cancer of non-thyroid cells normally present in the thyroid gland
- Papillary carcinoma is the most common. It spreads slowly and is the least dangerous type



visualthink

THYROID CANCER

Thyroid cancer is the most common endocrine cancer, however, it is rare compared to other types of cancers, and is, to a large extent, easily curable with surgery. The main sign of thyroid cancer is a lump in the thyroid gland, although most of them do not produce any symptom.

There are four different types of thyroid cancer:

- Papillary thyroid cancer: it is the most common type, accounting for about 70% to 80% of all thyroid cancers.
- Follicular thyroid cancer: accounts for about 10% to 15% of all thyroid cancers.
- Medullar thyroid carcinoma: usually occurs in families and is associated with other endocrine problems.

 Anaplastic thyroid cancer: it is the most aggressive thyroid cancer, and the one that is less likely to respond to treatment.
Fortunately, anaplastic thyroid cancer is the least common.

The prognosis of thyroid cancer is very good. In general, it is better in young patients than in those older than 40 years old, and it depends very much on the type of thyroid tumor in question.

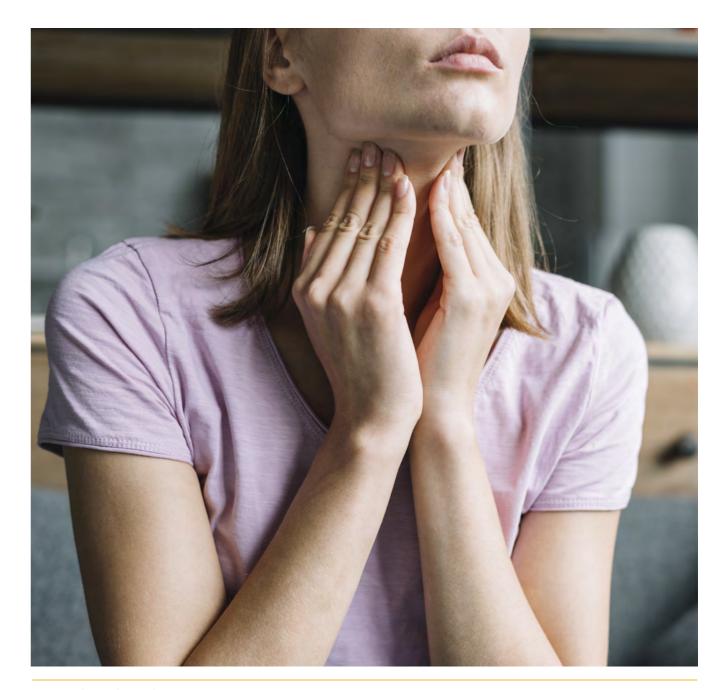
The main sign of thyroid cancer is a lump in the thyroid gland, although most of them do not produce any symptom.

PRACTICAL CASE

A 46-year-old candidate diagnosed with papillary thyroid cancer six years ago. He underwent surgery, removing the entire thyroid gland and then he received treatment with radioactive iodine. He is currently under treatment with thyroid hormone due to hypothyroidism secondary to treatment. The follow up carried out have not detected recurrence of the tumor disease. He requests evaluation for life insurance.

It should be postponed for the first four years due to the possibility of recurrence of the disease. Since he received treatment six years ago, he can be insured with an additional bonus of +2.5 per thousand for one year (third year after deferment) and two more years with an additional premium of +1 per thousand.

On the other hand, the candidate remains in a state of hypothyroidism with good pharmacological control, so no additional charge is necessary.



THYROID CANCER

LIFE AND DISABILITY

LII E AIND DISABILITI		
ТҮРЕ	POSTING TIME	ОМТ
Papillary and follicular	4 years	During the first year 5 per thousand, the second and third 2.5 thousand, fourth and fith 1 per thousand
Anaplastic and spinal	Decline	

ACCIDENT AND SHORT-TERM DISABILITU

After 5 years after the end of treatment and without recurrence, it can be considered as STANDARD

Taken from DAVINCI risk selection tool

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From left to right, Miguel Ángel Pinilla, Dr. Pedro Gargantilla, Almudena Gómez, Marcos Acosta, Rafael Storni-Santiago, Eduardo Folgado, Pedro Herrera.

MADRID RECEIVES A NEW WORKSHOP ON LIFE INSURANCE UNDERWRITING

On October 17, 2018, more than 70 professionals and directors from above 40 companies in Spanish market met in Madrid to listen to the technical workshop on Life Insurance underwriting organized by Nacional de Reaseguro, S.A.

NR CEO, Pedro Herrera, was in charge of the opening conference, and remarked the company's engagement in the creation and renewal of tools in order to improve the service provided to Life Insurance market. Miguel Ángel Pinilla, Risks Assessment Manager, and Medical Advisor doctor Pedro Gargantilla then took the floor to discuss the foundations of risk selection and go deeper into issues related to cardiac disease and HIV.

The event continued with the introduction of the underwriting system Davinci 3.0, and the future projects to be addressed in the development of the tool. Afterwards, Marcos Acosta, Head of Life, Accident & Health department offered an overview of the most recent tendencies of Life Insurance underwriting on a global level.

Eduardo Folgado, Senior Actuary, was the people in charge to close the workshop with a conference on the alternatives and opportunities to be explored by the industry in an online environment.



Pedro Herrera.

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