

A woman with curly hair is looking upwards with a hopeful expression. A doctor's hands are gently examining her neck. The background is a bright, out-of-focus window.

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Women's health depends on a lifetime
of answers—one test at a time.

Women and Thyroid Cancer

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Answers for life.

Women and Thyroid Cancer

Thyroid cancer is one of the most common forms of endocrine malignancy worldwide. While it is one of the top-10 malignancies for women, it is not among the top 15 for men. Women are almost three times more likely to get thyroid cancer than men, and usually at an earlier age, but the disease is typically more aggressive in men.¹ Over the past four decades, incidence rates have increased, especially in the U.S., Canada, and Europe. However, even as incidence rates have increased, mortality rates have stabilized.²



What Is Thyroid Cancer?

Thyroid cancer forms in the thyroid gland. There are four main types of thyroid cancer. They are classified by how the cancer cells appear under a microscope: papillary, follicular, medullary, and anaplastic. The majority of thyroid cancers grow very slowly, and can either be cured or treated successfully. Only anaplastic thyroid cancer, which represents 1% of thyroid cancers, grows quickly and is difficult to control.³

The Global Burden of Thyroid Cancer in Women

- Thyroid cancer is the ninth most common cancer in women.⁴
- In 2009, thyroid cancer resulted in an economic burden of \$3.7 billion.⁵
- By 2020, there will be almost 200,000 new cases of thyroid cancer annually.⁵



Gender Differences

The disparity between women and men is clearly documented by the incidence rates, but the factors driving higher incidence rates among women are less conclusive. Women generally develop thyroid cancer much earlier in life than men, but women are less likely to die from it than men. Women have a fatality rate of 21.6%, whereas men have a fatality rate of 29.6%.⁵

Risk Factors^{6,7}

Risk factors that may increase the occurrence of thyroid cancer include:

- Age (25–65 years)
- Gender
- Exposure to radiation
- Family history of thyroid disease or cancer
- History of enlarged thyroid (goiter)
- Genetic factors such as multiple endocrine neoplasia type 2 (MEN 2a, MEN 2b, FMTC)
- Iodine deficiency

Age, being female, and exposure to radiation are the most common risk factors. Previous cancer incidence may be another possible risk factor, but more conclusive studies are needed.

Siemens Solutions for Thyroid Cancer Testing

	ADVIA Centaur® Systems	ADVIA® Chemistry Systems	Dimension® Rxl Max®/ Xpand® Plus Systems	Dimension® EXL™ Systems	Dimension Vista® Systems	IMMULITE® Systems	Other Siemens Systems	Siemens Imaging Systems
Detection								•
3rd Generation TSH	•		•	•	•	•		
Free T3	•			•	•	•		
Free T4	•		•	•	•	•		
Total T3	•					•		
Total T4	•		•	•	•	•		
Calcitonin						•		
CEA	•				•	•		
Calcium		•	•	•	•			
Management								•
3rd Generation TSH	•			•	•	•		
Thyroglobulin						•		
Calcitonin						•		
Anti-Tg	•					•		
CEA	•				•	•		
Potassium		•	•	•	•			
Sodium		•	•	•	•			
Creatinine		•	•	•	•			
Alanine Aminotransferase		•	•	•	•			
Albumin		•	•	•	•			
Alkaline Phosphatase		•	•	•	•			
Bilirubin		•	•	•	•			
Lactate Dehydrogenase		•	•	•	•			
Calcium		•	•	•	•			
Chloride		•	•	•	•			
CRP		•	•	•	•			
Gamma-Glutamyltransferase		•	•	•	•			
Uric Acid		•	•	•	•			
Hemoglobin							•	
Leukocytes							•	
Thrombocytes							•	

References

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Symptoms

Thyroid cancer typically does not present with early symptoms, and it is found during a routine physical exam. The thyroid is a tiny gland (not much bigger than a small coin) that typically cannot be felt through the skin. Swelling or a lump in the neck are the most common symptoms of thyroid cancer. As the tumor gets larger, other symptoms may begin to occur, including:

- Difficulty breathing
- Difficulty swallowing
- Hoarseness

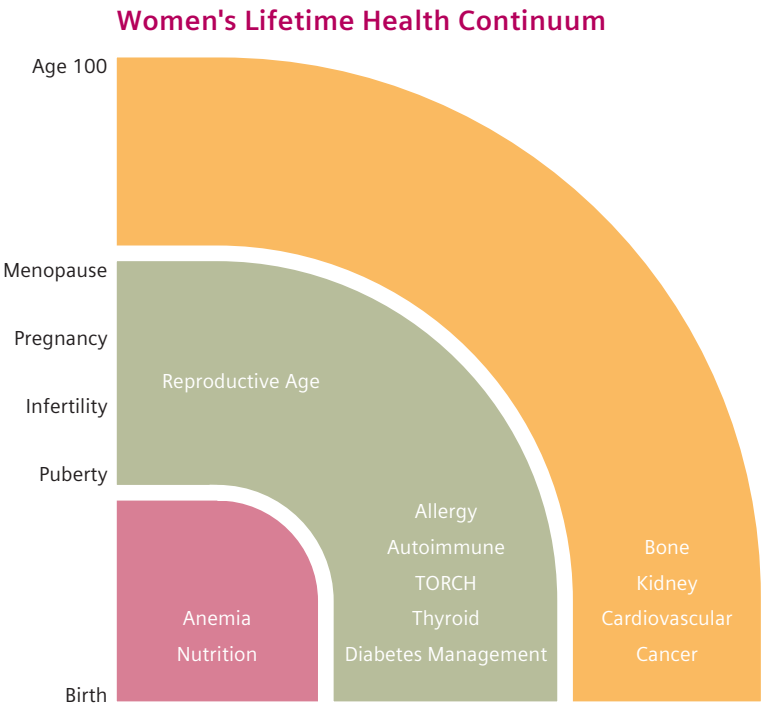
Related Diseases and Conditions

There are a number of other thyroid diseases: hypothyroidism, Hashimoto’s disease, hyperthyroidism, Graves’ disease, goiter, and nodules. Diagnosis of thyroid diseases and conditions involves clinical examination, blood tests, and, in some cases, imaging tests and/or biopsy.

Caring for Women with Thyroid Cancer

Reducing the burden of thyroid cancer in women includes understanding risk factors, making rapid, accurate diagnoses when symptoms occur, implementing appropriate therapies, and monitoring treatment. Laboratory diagnostics testing plays an integral role in caring for women throughout the continuum of the thyroid cancer treatment.

As an integrated diagnostics company, Siemens’ comprehensive solutions, which include multiple imaging modalities, follow the complete continuum of thyroid cancer care, including diagnosis, therapy, and aftercare. In addition, our solutions in healthcare information technology support the exchange of data for making informed decisions.





Your results. Her lifetime.

**Empowering you to advance the
health and vitality of women
throughout the continuum of life.**

Siemens Healthcare Diagnostics, a global leader in clinical diagnostics, provides healthcare professionals in hospital, reference, and physician office laboratories and point-of-care settings with the vital information required to accurately diagnose, treat, and monitor patients. Our innovative portfolio of performance-driven solutions and personalized customer care combine to streamline workflow, enhance operational efficiency, and support improved patient outcomes.

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