Parathyroid Cancer

What Is Parathyroid Cancer?

Parathyroid cancer is a rare type of cancer that develops in one of the parathyroid glands, located in the neck behind the thyroid gland. These small glands regulate calcium levels in the blood by producing parathyroid hormone (PTH).

Parathyroid cancer causes excessive production of PTH, leading to severely high calcium levels (hypercalcaemia). This condition can result in serious complications affecting the bones, kidneys, and overall health.

What Causes Parathyroid Cancer?

The exact cause of **parathyroid cancer** is unknown, but potential risk factors include:

- **Genetic conditions** – such as multiple endocrine neoplasia type 1 (MEN1) and hyperparathyroidism-jaw tumour syndrome
- **Radiation exposure** – previous radiation therapy to the neck may increase risk
- **Long-standing primary hyperparathyroidism** – in very rare cases, benign parathyroid adenomas may develop into cancer

What Are The Symptoms Of Parathyroid Cancer?

Parathyroid cancer often develops slowly, and early symptoms may be similar to primary hyperparathyroidism caused by a benign parathyroid adenoma. However, in cancer, symptoms tend to be more severe and may include:

- **A lump in the neck** – which may be firm, painless, and slowly growing
- **Severe hypercalcaemia (high calcium levels)** – leading to:
  - Fatigue and weakness
  - Frequent urination and excessive thirst
  - Nausea, vomiting, and constipation
  - Bone pain and increased risk of fractures
  - Kidney stones and kidney damage
  - Confusion, memory problems, or depression

- **Hoarseness or voice changes** – if the tumour affects the nerves to the vocal cords
- **Difficulty swallowing or breathing** – if the tumour presses on the windpipe or oesophagus

How Is Parathyroid Cancer Diagnosed?

Because parathyroid cancer is rare, diagnosis can be challenging. Your doctor may recommend:

- **Blood tests** – to check for very high calcium and PTH levels
- **Ultrasound scan** – to assess any lumps or abnormalities in the parathyroid glands
- **Sestamibi scan (parathyroid scan)** – a nuclear medicine test to locate overactive glands
- **CT or MRI scan** – to check if the cancer has spread
- **Fine needle aspiration biopsy (FNA)** – in some cases, a sample of the tumour may be taken for further testing

How Is Parathyroid Cancer Treated?

The main treatment for parathyroid cancer is surgical removal of the affected gland. Additional treatments may be needed if the cancer has spread.

- The primary treatment is to remove the cancerous parathyroid gland along with surrounding tissue to reduce the risk of recurrence

- Nearby lymph nodes and affected structures may also be removed if the cancer has spread

- Surgery is performed under general anaesthesia, and most patients stay overnight for monitoring

Additional treatments

- **Radiotherapy** – may be used after surgery to lower the risk of recurrence
- **Medication** – drugs like cinacalcet may be prescribed to help control calcium levels if surgery is not fully effective
- **Chemotherapy** – not commonly used but may be considered for advanced cases

What Are The Risks Of Parathyroid Cancer Treatment?

As with any surgery or cancer treatment, there are some risks, including:

- **Damage to surrounding structures** – such as the vocal cord nerves or nearby blood vessels
- **Hypocalcaemia (low calcium levels)** – if the remaining parathyroid glands do not function properly after surgery
- **Cancer recurrence** – in some cases, the cancer may return, requiring further treatment

What Is The Prognosis For Parathyroid Cancer?

Parathyroid cancer is rare but aggressive, and early detection is key to improving outcomes. With successful surgery, many patients can manage their calcium levels effectively and maintain a good quality of life. However, long-term follow-up is needed to monitor for recurrence.

Why Choose Birmingham Head And Neck Clinic?

At Birmingham Head and Neck Clinic, we specialise in the diagnosis and treatment of parathyroid conditions, including rare cases of parathyroid cancer. Our expert team offers:

- Advanced imaging and diagnostic services to ensure early and accurate detection
- Highly skilled surgical care for safe and effective treatment
- Personalised treatment plans tailored to your condition

- Ongoing monitoring and support to manage calcium levels and overall health

Contact Us

If you have been diagnosed with **parathyroid cancer** or have concerns about high calcium levels, our specialist team is here to help.