SISTRUNK PROCEDURE
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This information aims to help you understand the operation, what is involved and some common complications that may occur. It may help answer some of your questions and help you think of other questions that you may want to ask your cancer care team; it is not intended to replace advice or discussion between you and your cancer care team.

Visit the Head and Neck Cancer Australia website for further information thyroid cancer and what to expect.

AN OVERVIEW TO A SISTRUNK PROCEDURE

- The thyroid is located below the voice box around the windpipe (trachea). See picture below.

- Before you are born, the thyroid gland starts to grow at the back of the tongue. The thyroid moves down the middle of the neck and ends up below the voice box around the windpipe. A thyro (meaning thyroid) – glossal (meaning tongue) cyst is a fluid filled sac that forms along the path left by the thyroid as it travels down.
• The pathway contains tissue that is called a thyroglossal duct and passes through the middle of the hyoid bone, a small bone between the voice box and tongue.

• Most thyroglossal cysts are benign (not cancer) but in rare cases (about 1 – 2%) a cyst may be cancerous.
  ○ Usually the cancer is only found after the cyst is removed.
  ○ The cancer is called papillary cancer, a common type of thyroid cancer.

• A **sistrunk procedure** involves removal of the thyroglossal cyst, part of the thyroid bone and some more tissue to make sure that the thyroglossal duct is completely removed.
  ○ The procedure is named after the surgeon, Dr. Sistrunk.

**WHY IS A SISTRUNK PROCEDURE NEEDED**

• Removing the thyroglossal cyst, bone and duct using a sistrunk procedure helps reduce the risk of the cyst recurring.

• If the surgeon knows that a cyst is cancerous, they may remove all of the thyroid gland (**total thyroidectomy**) at the same time.

• **Radioactive iodine** is commonly used to treat thyroid cancers and this can only be used if the thyroid gland is removed. However, usually the cancer is only found after the cyst is removed so a decision needs to be made whether a second operation is needed to remove the thyroid gland.

• If the cancer has spread to the lymph nodes, then a **neck dissection** to remove lymph nodes in your neck may also be done.

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Visit the [Head and Neck Cancer Australia website](https://www.headandneckcancer.org.au) to download information on Thyroidectomy and Neck dissection

**HOW TO PREPARE FOR THE OPERATION**

**BEFORE THE OPERATION:**

• You will need to fast (have nothing to eat or drink) for 6 hours before your operation (unless advised differently by your surgeon or anaesthetist) because the sistrunk procedure is
performed under a general anaesthetic (you will be asleep and will not remember what happens during the operation).

- Your surgeon will explain the details of your operation. Be sure to bring up any questions or concerns, and share your needs and wishes with your doctor.

- You should speak to your doctor about how to manage aspects of your lifestyle, such as smoking, drinking alcohol and chronic conditions (e.g. diabetes and obesity) that may increase the risk of complications.
  
  - If you take blood thinning medication for a heart condition or blood clots (such as warfarin, Plavix, aspirin or Pradaxa), make sure your surgeon is aware. Some of these medications need to be stopped more than a week before the operation. Sometimes a short-acting blood thinner (such as Clexane) is used before and after the surgery

- You should also talk to your surgeon about any likely side effects that you can expect following the operation.

Visit the Head and Neck Cancer Australia website for further information about Thyroidectomy and Neck dissection, including what to expect during and after surgery.

WHAT TO EXPECT DURING THE OPERATION

- The operation takes about one hour.

- The incision (cut) may be about 4–6 cm long, usually over the lump, however it could be longer or shorter.

- Part of the hyoid bone and tissue in the tongue may be removed with the cyst.

WHAT TO EXPECT AFTER THE OPERATION

- After the operation, once you are fully awake, you will be moved to a bed in the hospital.

- You will have a surgical drain(s) coming from the area of your surgery to allow blood or lymphatic fluid to escape and prevent swelling. Drains will be checked and removed before you go home.
• You will be able to talk after the operation, but you may find swallowing painful for a few weeks. You should be able to eat and drink but soft food is usually recommended.

• Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation. Some stronger pain medications may also be charted but you will need to ask the nurse for these as needed.

• You may notice some numbness in the skin near the wound, this will improve over a few months.

• Most patients stay in hospital for 1–2 days; if you have a more major procedure such as a neck dissection, you may stay in hospital for a longer period, often 1 week.

### POSSIBLE RISKS OF A SISTRUNK PROCEDURE

All operations carry some risks such as blood clots, wound infections, bleeding, chest infection, adverse reactions to anaesthetic, and other complications. These risks will be explained by your cancer specialist and anaesthetist.

Your doctor will explain details of the operation, general risks and side effects of the operation, they may recommend:

- **stopping blood thinners** (e.g. aspirin) before surgery to reduce the risk of bleeding
- **a blood thinner** (called heparin) may be injected before and after surgery to reduce the risk of blood clots
- **antibiotics** to reduce to risk of wound infection
- **early mobilisation** to reduce the risk of blood clots and chest infection
- **special stockings** to reduce the risk of blood clots.

Sistrunk procedure is generally very safe, however specific risks associated with removal of a thyroglossal cyst include:

- **Nerve injury**: The nerves that control the tongue are near the hyoid bone. The chance of nerve injury is very small (< 1%).
• **Wound swelling/infection**: Because the hyoid bone is cut (like a fracture), there may be swelling in the wound. If you notice increasing fever, pain, redness or discharge from the wound this may indicate an infection.

**SIDE EFFECTS AND THEIR MANAGEMENT**

As with all operations, there is a chance that sistrunk procedure may lead to a number of side effects. You may not experience all of the side effects. Speak with your doctor if you have any questions or concerns about treatment side effects.

Side effects common for sistrunk procedure may include:

- **Nausea**: General anaesthetic may cause nausea. This will settle down soon after the operation and can be treated with medications.

- **Sore throat**: Your throat may be sore initially because of the breathing tube placed during the operation.

- **Pain management**: Pain is a common side effect of the operation. Your anaesthetist will give you pain medicine during the operation to keep you comfortable when you wake up, and you may continue on pain medicines to ensure pain is under control. Ensure you take pain relief medications as prescribed by your doctor and speak with your doctor if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download information on pain management, which is available on the Head and Neck Cancer Australia website.

- **Scar**: There will be a scar across the neck and may be red for a few months. The scar will be in a skin crease where possible.

**BEFORE GOING HOME**

- Any particular instructions for wound care or medications will be provided to you before you go home. You may want to download further information about wound care on the Head and Neck Cancer Australia website.

- Your doctor may prescribe pain medications to help relieve the pain following the operation. Ensure you take the pain relief medications as prescribed by your doctor and speak to your
doctor if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download information on pain management, which is available on the Head and Neck Cancer Australia website.

- You will be assessed by the team involved in your care before you go home and follow-up will be arranged with your surgeon and GP.
- You may return to work in two weeks, or sooner depending on your surgeon’s instructions and personal recovery.

CARE OF THE WOUND

- Each surgeon will close the wound in their own way. Often the wound will have sutures under the skin that cannot be seen. These will dissolve over time and they do not need to be removed. Avoid wearing any tight or restrictive clothing around the neck for a few weeks after the operation.
- There may be a small sticky dressing (called a ‘steri-strip’) over the wound when you are discharged from hospital. Your doctor will have specific instructions regarding when the dressing should be removed and whether you can get the wound wet.
- There may be a waterproof ‘glue’ dressing (Dermabond) over the wound following the operation. This is a temporary cover to keep the wound clean; it can be peeled off after a week or so.
- At your first postoperative check, the surgeon will discuss what you can apply to the wound to help avoid a noticeable scar.

ACTIVITIES

- For the first few days after arriving home from hospital, it is important to rest and not do any activities that involve moving the neck a lot. If possible, take one or two weeks off work depending on how labour-intensive your work may be.
• Do not do any heavy lifting, strenuous exercise or contact sports for a month after the operation, although it is ok to go for walks as soon as you feel up to it. If you have small children it is recommended that you do not lift them for 1–2 weeks.

• You can drive after a week or as soon as you feel comfortable with the range of movement in your neck, but you must not drive if you feel that your ability is impaired.

SYMPTOMS TO WATCH FOR AFTER DISCHARGE FROM HOSPITAL

• **Significant swelling:** There may be some mild swelling after the operation. This is normal and may last for some weeks. However, if this becomes very noticeable and painful, contact the surgeon, your family doctor or the hospital.

• **Difficulty breathing or swallowing:** You should be able to breathe normally after your surgery. If you are having difficulty breathing or swallowing, immediately go to the hospital emergency department or contact your surgeon.

• **Discharge from the wound:** If the wound becomes red, hot and starts to discharge, these are signs of an infection. Contact the surgeon or your family doctor, as you may need antibiotics.

• **Fever:** Contact your surgeon or your family doctor, if you develop a fever.

FOLLOW-UP CARE

• After your operation, you will continue to have regular follow-up visits with your specialist doctor. If the tumour removed is benign (not cancer) then only one or two visits may be needed. However, if the tumour is a cancer then you will need long-term follow-up.

• Sometimes the diagnosis of cancer has been made prior to the operation, based on a biopsy, so you are prepared for this result. However sometimes an unexpected cancer may be found. Should this happen, your treatment plan may change.

• Depending on the pathology report, it may be recommended that you have radioactive iodine and/or further surgery. You will be referred to doctors (oncologists) who specialise in cancer treatment.
Visit the Head and Neck Cancer Australia website for further information about side effects of Thyroidectomy and Neck dissection, including questions to ask your doctor.

QUESTIONS TO ASK YOUR DOCTOR:

- What will happen if I don't have the surgery?
- What are the possible side effects or complications?
- How long will the operation take?
- How long will I be in hospital?
- What lifestyle changes (diet, exercise) do you recommend I make?
- How much will the operation cost? Will my health insurance cover it?
You may want to write specific questions here to ask your doctor or cancer care team

About Head and Neck Cancer Australia

Head and Neck Cancer Australia (formerly Beyond Five) is Australia's only charity dedicated to providing information and support to people living with head and neck cancer, caregivers, family and healthcare professionals.

Head and Neck Cancer Australia's mission is to improve the quality of life of everyone affected by head and neck cancer through education and access to support and to raise awareness of head and neck cancer nationally.

Head and Neck Cancer Australia supports people through their cancer journey, from diagnosis to treatment and life after cancer by providing comprehensive, easy to understand and easy to access information. We have the only Directory of Head and Neck Cancer services and support groups available in Australia and New Zealand helping people to find the right services and support when they need it most.

Phone: 1300 424 848
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Web: www.headandneckcancer.org.au

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