



HEAD & NECK CANCER
AUSTRALIA
ENGAGE • EDUCATE • EMPOWER

TRANS-ORAL ROBOTIC SURGERY (TORS)



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Trans-oral robotic surgery

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](#).

AN OVERVIEW TO TRANS-ORAL ROBOTIC SURGERY (TORS)

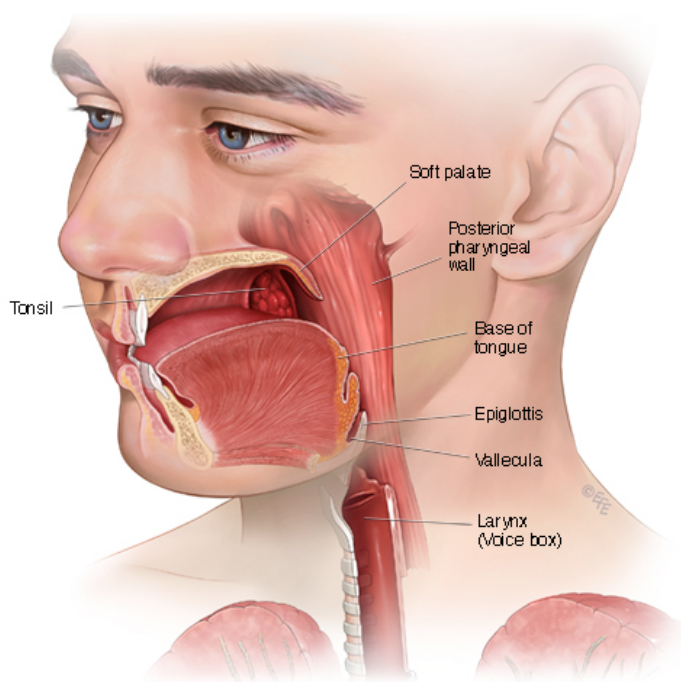
- TORS uses robotic arms that are positioned inside the mouth to remove a tumour from the throat.
- TORS is a minimally invasive surgery which means the cancer is removed without external incisions (cuts).
- The operation uses the da Vinci Surgical system, which consists of:
 - o a console from where the surgeon remotely controls the robotic surgical arms.
 - o a surgical robot positioned next to the patient. This has robotic arms with instruments and a camera that extend into the patient's mouth. The 3-dimensional (3D) video camera provides a detailed view to the surgeon.

WHY IS TORS NEEDED

- TORS is used to remove a cancer from the mouth or throat from areas that are usually hard to reach (see picture below).
- Not all cancers are suitable for removal by robotic surgery, and it is only available in some hospitals.
- Sometimes, in addition to the cancer in the throat, the lymph nodes in the neck may also need to be removed – this is called a neck dissection and is not usually done with a robot. This can be done at the same time as TORS or several weeks afterwards. You may want to download information about [neck dissection](#), which is available on the [Head and Neck Cancer Australia website](#).

- Using the robotic arms, the surgeon can access areas through the mouth that their hands may not be able to reach – this means the operation can be done through the mouth instead of more invasive surgery that involves cutting the lip and jaw (called a mandibulotomy). You may want to download information about [mandibulotomy](#), which is available on the [Head and Neck Cancer Australia website](#).
- Not only will the surgeon be able to see better from the 3-D video camera, but the camera also provides a magnified view of the operating field to help improve the accuracy and precision of the operation.
- To reduce the chance of any cancer cells being left behind, the cancer and an area of normal tissue surrounding it will be removed.
- Tissue removed from TORS will be examined in detail by a specialist pathologist, under a microscope to look for cancer cells and decide whether the cancer has been completely removed and whether additional treatment, such as radiation therapy is needed. Further information about [pathology reports](#) is available on the [Head and Neck Cancer Australia website](#).

Visit the [Head and Neck Cancer Australia website](#) for further information about the specific surgery to remove a particular cancer and what to expect.



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 TORS 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 [cancer care team](#).
- 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.
- Advise your surgeon if you have any loose or fragile teeth as there may be pressure applied to them during TORS.
- Talk to your [cancer care team](#) about any likely side effects to expect following the operation, such as problems with speech and swallowing. You may find it useful to talk to a dietitian, speech pathologist or specialist head and neck nurse about these issues.

Possible questions that you may want to ask your cancer care team

- How long will it take before I can eat again?
- What kinds of food should I eat after the operation?
- Will I need a feeding tube?
- When will I be able to talk?
- Will my speech be affected thereafter?
- Will I need a tracheostomy (breathing tube)?
- Is the operation painful? How will I control the pain?

Additional questions are listed at the end of this factsheet.

Visit the [Head and Neck Cancer Australia website](#) for further information on the health professionals who may be part of your cancer care team

WHAT TO EXPECT DURING THE OPERATION

- TORS usually takes about 1–3 hours, depending on how complex your operation may be. In many cases, TORS may be combined with a neck dissection which will also take 2 – 3 hours.
- Once asleep, the surgeon will perform a careful examination of the cancer to help plan the surgery. A specially designed metal retractor is then placed into the mouth to keep it open and move the tongue aside.
- Once the area for the surgery is exposed and clearly visible, the robotic arms and camera will be moved into the mouth and the surgery proceeds to remove the cancer.

Visit the [Head and Neck Cancer Australia website](#) for further information about the particular surgery you are having for your cancer.

WHAT TO EXPECT AFTER TORS

- After the operation, once you are fully awake, you will be moved to a bed in the hospital room or intensive care unit.
- Usually, you can start to drink liquids after a few days and progress to a puree diet for a few weeks before restarting a normal diet.
- Many patients have a feeding tube that passes from the nose into the stomach to help maintain their nutrition in the first week after the operation. You may want to download information on [feeding tubes](#), which is available on the [Head and Neck Cancer Australia website](#).
- Your anaesthetist and surgical team will give you medicine to help control any pain and nausea after the operation.
- Patients who had TORS without neck dissection are usually well enough to go home within 2–4 days. Patients having neck dissection at the same time usually need 5–10 days in hospital.

POSSIBLE RISKS OF TORS

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.

TORS may have additional risks because it involves:

- o operating around important blood vessels, there is a chance that major bleeding may occur during the operation or whilst recovering from TORS. If you notice fresh blood in your mouth, you should contact your surgeon. If there are large amounts of blood, you may need to call an ambulance.
- o important nerves that may be removed with the cancer or they may be injured; it may affect speech, swallowing or the feeling in your tongue.
- o having your mouth held open during the operation with a special retractor. If you have fragile teeth they may be damaged during the operation.

Specific risks related to TORS that you should know about include:

- **Infection:** The mouth has lots of bacteria. These bacteria can cause an infection in the neck wound after the surgery. Antibiotics are given during surgery and for a day or so after, but infections can still happen. This might require opening part of the wound to allow any pus to drain out.
- **A fistula:** If the seal separating the throat from your neck breaks down, saliva can leak causing an infection. This can be a very serious complication and might require opening a wound to allow it to drain or return to the operating room to fix the seal.

SIDE EFFECTS AND THEIR MANAGEMENT

As with all operations, there is a chance that TORS 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 following TORS include:

- **Nausea:** General anaesthetic may cause nausea. This will settle down soon after the operation and can be treated with medications.
- **Swollen tongue:** Since the front of the tongue is pushed out of the way during the procedure and compressed, some patients find the tongue is swollen straight after surgery and the nerves can be temporarily affected, causing reduced sensation, taste and movement.
- **Sore throat:** Your throat will be sore and may require pain relief medicine for 1–2 weeks whilst raw surface (where the cancer has been removed) heals.
- **Changes in eating and speaking:** TORS may affect eating and speaking. Many patients find it difficult to eat for a few weeks, especially if they have a neck dissection together with TORS. It may be useful to have a tablet/portable device or pen and paper to write down what you want to say. The speech pathologist and dietician will provide any assistance needed to help with your speaking and eating during recovery.
- **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 to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [pain management](#), which is available on the [Head and Neck Cancer Australia website](#).

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 pain following the operation. Ensure you take the pain relief medications as prescribed by your doctor and speak to your cancer care team if the pain is not under control, gets worse or if the medication causes any side effects. You may want to download further information about [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 arranged with your surgeon and GP.
- Follow-up will also be arranged as needed with a speech pathologist, or any other allied health professionals to assist you with supportive care.
- Your recovery at home may vary and you should allow time for your body to recover and heal. Regular follow-up helps to assess your progress.

FOLLOW-UP CARE

- After your operation, you will continue to have regular follow-up visits with your specialist doctor and cancer care team to assess your progress. This might include removing sutures and redressing the wound.
- Head and neck cancers often require treatment with more than one form of therapy to reduce the risk of cancer recurring. Many patients need radiation therapy after TORS, and sometimes the [radiation therapy](#) will be combined with [chemotherapy](#). This will depend on what the pathologist reports after carefully examining the cancer and lymph nodes.
- Your treating doctors will be able to discuss the likelihood of needing further treatment before your surgery but will not be certain until the pathology report is available, which usually takes about two weeks.

- Other referrals will be arranged as needed with other members of your cancer care team, such as a speech pathologist, to assist you with any difficulties.
- Any additional reconstruction, cosmetic procedures or treatments that you may need are planned after discharge. This enables time for you to recover from the initial surgery, to get results of the pathology that examined the tissue removed at surgery, and to make the arrangements for any additional treatment or next steps.
- The course of recovery will depend on the surgery you had, and also on any additional reconstruction or treatment.

For further information about the operation for cancer and what to expect, you can also refer to [Understanding Surgery a guide for people with cancer, their families and friends.](#)

QUESTIONS TO ASK YOUR DOCTOR:

- What are the benefits of TORS?
- Could I have radiation therapy instead of TORS?
- What will happen if I don't have the surgery?
- What are the possible side effects of TORS? How can they be prevented or controlled?
- How long will TORS take?
- How long will I be in hospital and how long do I need off driving, work and exercise?
- What lifestyle changes (diet, exercise) do you recommend I make?
- What are the chances that the surgery will cure the cancer?
- How much will the operation cost? Will my health insurance cover it?
- What follow-up tests will I need after the operation?
- If I wanted to get a second opinion, can you provide all my medical details?



You may want to write additional 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

Email: contact@headandneckcancer.org.au

Web: www.headandneckcancer.org.au

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