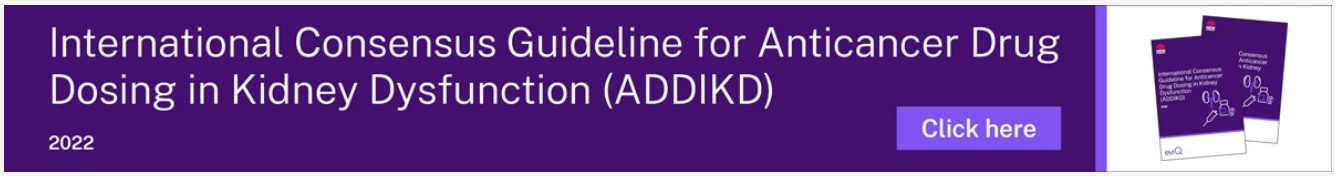
Breast adjuvant goserelin

ID: 29 v.5 **Endorsed** Essential Medicine List

Check for clinical trials in this patient group. Link to Australian Clinical Trials website

The anticancer drug(s) in this protocol may have been included in the ADDIKD guideline. Dose recommendations in kidney dysfunction have yet to be updated to align with the ADDIKD guideline. Recommendations will be updated once the individual protocol has been evaluated by the reference committee. For further information refer to the ADDIKD guideline. To assist with calculations, use the eviQ Estimated Glomerular Filtration Rate (eGFR) calculator.



Related pages:

- Breast adjuvant exemestane and goserelin

Treatment schedule - Overview

Cycle 1 and further cycles

Drug	Dose	Route	Day
Goserelin	3.6 mg	Subcut	1

Frequency: 28 days

Cycles: Continuous for up to 5 years

Drug status: Goserelin is a PBS restricted benefit

Cost: ~ $220 per month

Treatment schedule - Detail

The supportive therapies (e.g. antiemetics, premedications, etc.), infusion times, diluents, volumes and routes of administration, if included, are listed as defaults. They may vary between institutions and can be substituted to reflect individual institutional policy.

*Antiemetics if included in the treatment schedule are based upon recommendations from national and international guidelines. These are **defaults only** and may be substituted to reflect individual institutional policy. Select here for recommended doses of alternative antiemetics.*

Cycle 1 and further cycles

Day 1		
Goserelin	3.6 mg (Subcut)	inject subcutaneously into the upper anterior abdominal wall

Frequency: 28 days

Cycles: Continuous for up to 5 years

Indications and patient population

- Hormone-dependent breast cancer

Clinical information

Bone mineral density (BMD)	Baseline BMD and repeat as clinically indicated. Lifestyle modification including regular exercise, particularly weight bearing exercises should be encouraged.
Supplements	Consider daily oral supplements of at least calcium 500 mg and vitamin D 400 International Units for the duration of the therapy.
Blood tests	Lipid studies, calcium and vitamin D at baseline and repeat as clinically indicated.
Fertility, pregnancy and lactation	Cancer treatment can have harmful effects on fertility and this should be discussed with all patients of reproductive potential prior to commencing treatment. There is a risk of foetal harm in pregnant women. A pregnancy test should be considered prior to initiating treatment in females of reproductive potential if sexually active. It is important that all patients of reproductive potential use effective contraception whilst on therapy and after treatment finishes. Hormonal methods of birth control should not be used during this treatment. Effective contraception methods and adequate contraception timeframe should be discussed with all patients of reproductive potential. Possibility of infant risk should be discussed with breastfeeding patients. Read more about the effect of cancer treatment on fertility

Dose modifications

Evidence for dose modifications is limited, and the recommendations made on eviQ are intended as a guide only. They are generally conservative with an emphasis on safety. Any dose modification should be based on clinical judgement, and the individual patient's situation including but not limited to treatment intent (curative vs palliative), the anti-cancer regimen (single versus combination therapy versus chemotherapy versus immunotherapy), biology of the cancer (site, size, mutations, metastases), other treatment related side effects, additional co-morbidities, performance status and patient preferences.Suggested dose modifications are based on clinical trial findings, product information, published guidelines and reference committee consensus . The dose reduction applies to each individual dose and not to the total number of days or duration of treatment cycle unless stated otherwise. Non-haematological gradings are based on Common Terminology Criteria for Adverse Events (CTCAE) unless otherwise specified. Renal and hepatic dose modifications have been standardised where possible. For more information see dosing considerations & disclaimer .

Renal impairment
No dose modifications necessary

Hepatic impairment
No dose modifications necessary

Interactions

Drug interactions in eviQ protocols are under review and being updated to align with current literature. Further site-wide updates and changes will occur in due course. References & Disclaimer

The drug interactions shown below are not an exhaustive list. For a more comprehensive list and for detailed information on specific drug interactions and clinical management, please refer to the specific drug product information and the following key resources:

- *MIMS - interactions tab (includes link to a CYP-450 table) (login required)*
- *Australian Medicines Handbook (AMH) – interactions tab (login required)*
- *Micromedex Drug Interactions (login required)*
- *Cancer Drug Interactions*

- *Cytochrome P450 Drug Interactions*

Goserelin		
	Interaction	**Clinical management**
Drugs that may prolong the QTc interval (e.g. azole antifungals, tricyclic antidepressants, antiarrhythmics etc.)	Additive effect with goserelin; may lead to torsades de pointes and cardiac arrest	Avoid combination or minimise additional risk factors (e.g. correct electrolyte imbalances) and monitor ECG for signs of cardiac arrhythmia

Administration

eviQ provides safe and effective instructions on how to administer cancer treatments. However, eviQ does not provide every treatment delivery option, and is unable to provide a comprehensive list of cancer treatment agents and their required IV line giving set/filter. There may be alternative methods of treatment administration, and alternative supportive treatments that are also appropriate. Please refer to the individual product information monographs via the TGA website for further information.

Day 1

Subcutaneous injection

Safe handling and waste management (reproductive risk only)

Safe administration

Treatment - Time out

Goserelin SafeSystem™ implant

- administer goserelin as a subcutaneous injection into the anterior abdominal wall (below the umbilicus):
  - apply local anaesthetic (e.g. EMLA®, LMX4®, lignocaine 1%) to the injection site (if indicated) and wait for it to take effect. An ice pack with no local anaesthetic may also be used
  - wipe residual topical anaesthetic cream from chosen injection site (if used).

For correct administration of Zoladex®, refer to the instructions supplied with the product:

- put patient in a comfortable position with upper body slightly raised
- swab abdominal injection site below the navel line
- open pouch at the arrows and remove syringe
- hold the syringe at a slight angle to the light
- check that at least part of the goserelin implant is visible
- grasp the plastic safety tab and pull away from the syringe and discard
- remove the needle cover. Unlike liquid injections, there is no need to remove air bubbles and attempts to do so may displace the implant
- hold the syringe around the protective sleeve
- pinch the patient's skin and insert the needle at a slight angle 30 to 45 degrees to the skin, with the opening of the needle facing up, until the protective sleeve touches the patient's skin
- do not penetrate into muscle or peritoneum
- to discharge goserelin implant and to activate the protective sleeve, depress the plunger until you cannot depress it any further. If the plunger is not depressed fully the protective sleeve will NOT activate. You may hear a click and will feel the protective sleeve automatically begin to slide to cover the needle.
- withdraw the needle and allow the protective sleeve to continue to slide and cover the needle
- rotate the injection site each time to avoid soreness at any one site.

Continue safe handling precautions (reproductive risk only) for 7 days after completion of drug(s).

Discharge Information

Supplements

- Daily oral supplements of calcium 500 mg and vitamin D 400 International Units are recommended.

Patient information

- Ensure patient receives patient information sheet.

Side effects

The side effects listed below are not a complete list of all possible side effects for this treatment. Side effects are categorised into the approximate onset of presentation and should only be used as a guide.

Immediate (onset hours to days)	
Headache	

Early (onset days to weeks)	
Hot flushes	
Fluid retention and oedema	An excess amount of fluid around the cells, tissues or serous cavities of the body, leading to swelling.
Hyperlipidaemia and hypercholesterolaemia	Abnormally elevated levels of lipids and cholesterol in the blood.

Late (onset weeks to months)	
Vaginal atrophy	Read more about vaginal dryness
Reduced libido and sexual dysfunction	Lowered sexual desire as well as any physical or psychological problem that interferes with the ability to have and/or enjoy sex.

Delayed (onset months to years)	
Menopausal symptoms	Irregular or absent periods, hot flushes, mood swings, sleep disturbance, night sweats, vaginal dryness, decreased libido and dyspareunia. This is caused by ovarian failure and may be temporary or permanent.
Osteoporosis	

Evidence

Ovarian suppression with luteinising hormone-releasing hormone (LHRH) agonists have shown to reduce the risk of recurrence and mortality in pre-menopausal women with hormone receptor positive early breast cancer.[1] The results of the SOFT and TEXT trials showed that recurrence is significantly reduced in patients treated with exemestane plus an LHRH agonist compared with those treated with tamoxifen plus an LHRH.[2]

Although the duration of LHRH treatment was 2 years in most trials, the optimum duration of treatment with LHRH agonists is unknown with some trials using LHRH for 18 months, 3 years, or 5 years.[1] Patients in the SOFT and TEXT trials received LHRH treatment for a total of 5 years.[2]

Data on the long-term benefit of LHRH agonists is provided by the ZIPP trial, a randomised controlled trial involving 2706 patients comparing goserelin alone, tamoxifen alone, goserelin and tamoxifen or no treatment following primary therapy (surgery with or without radiation therapy/chemotherapy) in premenopausal women with invasive, operable breast cancer.[3] Between August 1987 and March 1999, 469 women received goserelin alone (3.6 mg every 4 weeks), 879 women received tamoxifen alone (20 or 40 mg daily), 882 women received both treatments and 476 women did not receive endocrine therapy. Treatment was administered for 2 years. The primary end point was event-free survival (EFS) and secondary end points were overall survival (OS), risk of recurrence and risk of dying from breast cancer.[3]

Efficacy

After a median follow up of 12 years, goserelin was associated with a risk reduction in all four endpoints: the risk of having as EFS event (HR=0.82, 95% CI 0.73 to 0.92, p =0.001), overall mortality (HR=0.83, 95% CI 0.71 to 0.96, p =0.013), the risk of recurrence (HR=0.81, 95% CI 0.71 to 0.92, p =0.001) and breast cancer mortality (HR=0.82, 95% CI 0.70 to 0.96, p =0.03).[3]

Women who received tamoxifen had a smaller benefit for survival and recurrence due to goserelin.

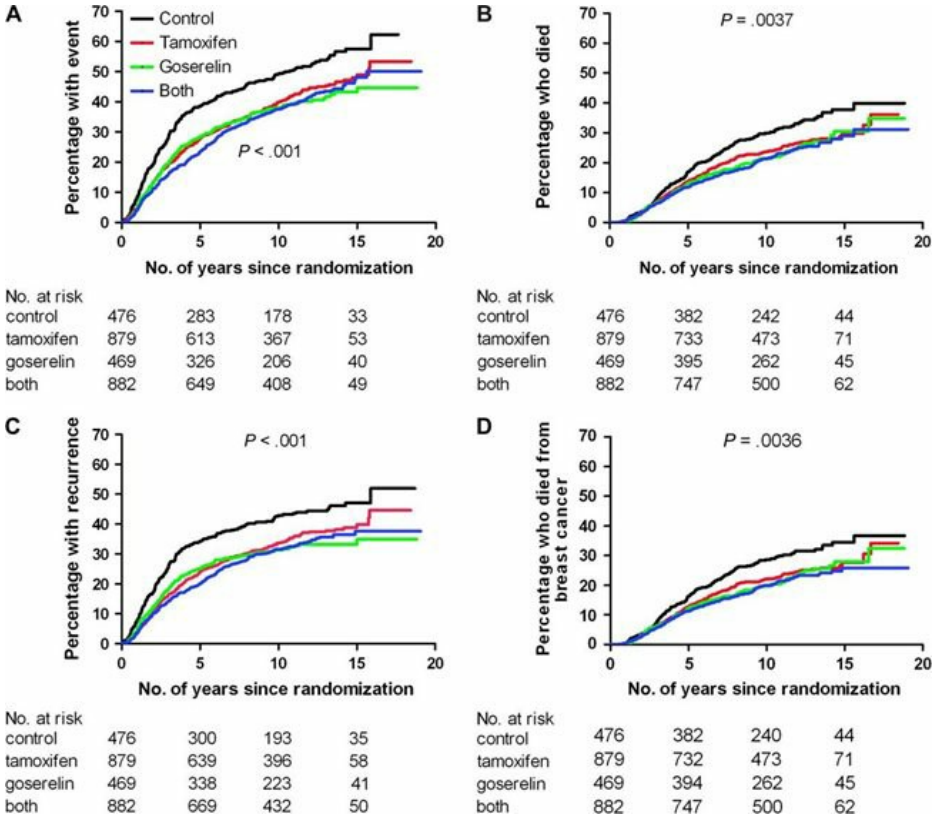
Table 1. Examination of the interaction between goserelin and tamoxifen

Treatment	Hazard ratios* (95% confidence interval)			
	Any event‡	Death from any cause	Breast cancer recurrence‡	Death from breast cancer‡
Tamoxifen†				
No	0.67 (0.56 to 0.81)	0.71 (0.56 to 0.91)	0.66 (0.53 to 0.81)	0.71 (0.55 to 0.92)
Yes	0.92 (0.79 to 1.06)	0.90 (0.74 to 1.09)	0.91 (0.77 to 1.07)	0.89 (0.73 to 1.09)
No endocrine therapy	1 (referent)	1	1	1
Tamoxifen alone	0.71 (0.60 to 0.84)	0.74 (0.60 to 0.91)	0.69 (0.57 to 0.83)	0.72 (0.58 to 0.90)
Goserelin alone	0.67 (0.56 to 0.81)	0.71 (0.56 to 0.91)	0.66 (0.53 to 0.81)	0.71 (0.55 to 0.92)
Both tamoxifen and goserelin	0.65 (0.55 to 0.78)	0.66 (0.54 to 0.83)	0.63 (0.52 to 0.76)	0.64 (0.51 to 0.81)
Tamoxifen alone	1 (referent)	1	1	1
Both tamoxifen and goserelin	0.92 (0.80 to 1.07)	0.90 (0.75 to 1.09)	0.91 (0.78 to 1.07)	0.89 (0.73 to 1.09)
Goserelin alone	1	1	1	1
Both tamoxifen and goserelin	0.97 (0.81 to 1.17)	0.93 (0.74 to 1.18)	0.95 (0.78 to 1.17)	0.90 (0.70 to 1.16)

* The hazard ratios can be converted to percentage reduction or increase in risk by subtracting 1 and multiplying by 100.

† The hazard ratios are for goserelin vs no goserelin. The *P* values for the test of interaction between goserelin and tamoxifen were .01 (any event), .13 (death from any cause), .016 (breast cancer recurrence), and .17 (death from breast cancer).

‡ Recurrence, new tumor, or death.



Toxicity

Amenorrhoea occurred in more than 95% of goserelin patients by 6 months versus 58.6% of CMF patients. Menses returned in most goserelin patients after therapy stopped, whereas amenorrhoea was generally permanent in CMF patients (22.6% v 76.9% amenorrhoeic at 3 years) Oestrogen related side effects were higher with goserelin but reduced to a level below that of CMF when treatment stopped.[4]

Table 4. Incidence of Elicited Side Effects

	Elicited Side Effect (%)* (WHO grades ≥ 1)							
	3 Months		6 Months (end of CMF)		2 Years (end of goserelin)		3 Years (no treatment)	
	Goserelin	CMF	Goserelin	CMF	Goserelin	CMF	Goserelin	CMF
Cytotoxic side effects								
Nausea/vomiting†	8.4	66.3	5.4	57.9	3.8	2.3	3.7	2.4
Alopecia	5.4	45.4	3.6	44.9	3.4	2.8	2.4	1.6
Infection	4.3	11.3	4.9	13.4	1.5	3.0	3.5	3.0
Diarrhea	3.4	10.3	2.1	10.3	0.9	1.2	0.8	1.2
Menopausal symptoms								
Vaginal dryness	23.0	10.1	25.6	15.2	25.9	13.5	9.5	14.1
Hot flashes	74.1	24.0	74.6	44.6	60.4	42.4	18.6	39.6

*Percentage calculated as a proportion of patients available for assessment at each time point.
†More than 97% of CMF patients received antiemetics at each cycle.

References

1 Cuzick, J, L Ambroisine, N Davidson, et al. 2007. "Use of luteinising-hormone-releasing hormone agonists as adjuvant treatment in premenopausal patients with hormone-receptor-positive breast cancer: a meta-analysis of individual patient data from randomised adjuvant trials." Lancet 369(9574):1711-1723.

2 Pagani, O., M. M. Regan, B. A. Walley, et al. 2014. "Adjuvant exemestane with ovarian suppression in premenopausal breast cancer." N Engl J Med 371(2):107-118.

3 Hackshaw, A., M. Baum, T. Fornander, et al. 2009. "Long-term effectiveness of adjuvant goserelin in premenopausal women with early breast cancer." J Natl Cancer Inst 101(5):341-349.

4 Jonat, W., M. Kaufmann, W. Sauerbrei, et al. 2002. "Goserelin versus cyclophosphamide, methotrexate, and fluorouracil as adjuvant therapy in premenopausal patients with node-positive breast cancer: The Zoladex Early Breast Cancer Research Association Study." J Clin Oncol. 20(24):4628-4635.

History

Version 5

Date	Summary of changes
12/10/2020	Treatment duration changed to up to 5 years in treatment schedule and patient information. Version number changed to V.5.

Version 4

Date	Summary of changes
11/01/2010	Review, new dose modifications and transferred to eviQ
10/12/2010	New format to allow for export of protocol information Protocol version number changed to *V.2* Antiemetics and premedications added to the treatment schedule Additional Clinical Information, Key Prescribing table and Key Administration table combined into new section titled Clinical Considerations Drug specific information placed behind the drug name link
06/04/2011	Safe-handling information removed as not required for this protocol.
27/04/2012	Protocol reviewed at Medical Oncology Reference Committee meeting No change and next review in 1 year
21/10/2013	Evidence updated
08/12/2014	Protocol reviewed by committee via teleconference on 28/11/14 Evidence updated and treatment duration changed to 'up to 5 years'

Date	Summary of changes
	Protocol version number changed to *V.3* PHC view removed Next review in 1 year
17/06/2015	Protocol electronically reviewed by Medical Oncology Reference Committee. No change, review in 1 year
02/11/2015	Tumour flare side effect removed
08/01/2016	Drug interactions updated
08/04/2016	Protocol reviewed at Medical Oncology Reference Committee meeting. Indication modified. Next review in 2 years.
31/05/2017	Transferred to new eviQ website. Version number change to V.4. Tumour flare clinical information removed as not relevant to adjuvant protocol.
30/01/2019	Protocol electronically reviewed by Medical Oncology Reference Committee. ID 1785 added as a related page. Next review in 5 years.

First approved: 5 September 2006
Last reviewed: 30 January 2019
Review due: 31 December 2023

The currency of this information is guaranteed only up until the date of printing, for any updates please check:
https://www.eviq.org.au/p/29
07 Jun 2023

Patient information - Breast cancer adjuvant - Goserelin

Patient's name:

Your treatment

The treatment schedule below explains how the drug for this treatment is given.

Goserelin

This treatment cycle is repeated every 28 days for up to 5 years. Your doctor will advise you how long you will have the treatment for.

Day	Treatment	How it is given	How long it takes
1	**Goserelin** (*GOE-se-REL-in*)	By injection under the skin of your stomach. You may develop bruising around the site of the injection, this will fade over time.	About 5 minutes

When to get help

Emergency contact details

Ask your doctor or nurse from your treating team when you should get help and who to contact if you have a problem

Daytime: .....

Night/weekend: .....

Other instructions: .....

.....

.....

Other information about your treatment

Changes to your dose or treatment delays

Sometimes a treatment may be started at a lower dose or the dose needs to be changed during treatment. There may also be times when your treatment is delayed. This can happen if your doctor thinks you are likely to have severe side effects, if you get severe side effects, if your blood counts are affected and causing delays in treatment, or if you are finding it hard to cope with the treatment. This is called a dose reduction, dose change or treatment delay. Your doctor will explain if you need any changes or delays to your treatment and the reason why.

Blood tests and monitoring

You may need to have blood tests while you are receiving this treatment. Your doctor or nurse will tell you when to have these blood tests.

Other medications given during this treatment

- **Calcium and vitamin D supplements:** you may be given some calcium and vitamin D tablets. Your doctor or nurse will tell you how and when to take these.

Side effects

Cancer treatments can cause damage to normal cells in your body, which can cause side effects. Everyone gets different side effects, and some people will have more problems than others.

The table below shows some of the side effects you may get with this treatment. You are unlikely to get all of those listed and you may also get some side effects that have not been listed.

Tell your doctor or nurse about any side effects that worry you. Follow the instructions below and those given to you by your doctor or nurse.

Immediate (onset hours to days)	
Headache	• You can take paracetamol if you have a headache. • **Tell your doctor or nurse immediately, or go to the nearest hospital Emergency Department if you get a very bad headache that is not helped by pain medication.**

Early (onset days to weeks)	
Hot flushes	• You may get flushing of your face, sweating and sensations of heat. • Avoid alcohol, coffee, tea and spicy foods, as they can make hot flushes worse. • Wear lightweight clothes made from natural fibres; dress in layers. • Put a cold, wet towel against your neck during hot flushes. • Talk to your doctor or nurse about other ways to manage these symptoms.
Extra fluid in the body (fluid retention)	• You may gain weight over a short amount of time. • Your hands and feet may become swollen, appear red or feel hot and uncomfortable. • Wear loose clothing and shoes that are not too tight. • Try not to stand up or walk around too much at one time. • If your ankles or legs get swollen, try raising them. • Make sure that any cuts or areas of broken skin are treated as soon as possible. • **Tell your doctor or nurse as soon as possible if you get any of the symptoms listed above or gain 1 to 2 kg in a week.** • **Tell your doctor or nurse immediately or go to the nearest hospital Emergency Department if you become short of breath.**
High blood cholesterol levels	• This treatment may increase your blood cholesterol levels. This is not a side effect you will notice. • Your cholesterol levels will be checked during your treatment.

Late (onset weeks to months)	
Vaginal changes	• You may get a dry vagina. • This may cause pain or discomfort during sex. • Use a vaginal moisturiser. • Before sex use a water-based lubricating gel. • Talk to your doctor or nurse about other ways to manage these symptoms.
Low sex drive	• This treatment lowers the amount of sex hormone in your body. • You may lose interest in sex, or have trouble having sex. • Talk to your doctor or nurse about ways to manage these symptoms.

Delayed (onset months to years)	

Menopausal symptoms	• You may get:
	  ◦ hot flushes or night sweats
	  ◦ mood changes
	  ◦ vaginal dryness
	  ◦ irregular or no periods.
	• You may also:
	  ◦ have trouble sleeping
	  ◦ find sex painful or lose interest in sex
	• These symptoms may go away after treatment, or the menopause may be permanent.
	• If you have sex you should use contraception as there is still a risk of pregnancy. Talk to your doctor about what form of contraception is right for you.
	• Talk to your doctor or nurse about ways to manage these symptoms.

Weak and brittle bones (osteoporosis)	• Your bones may fracture easily and may become painful. • You may have trouble moving around. • You may find it hard to perform daily chores. • Try to do some weight-bearing exercise for 30 minutes at least three times a week. • Watch out for slippery floors and make sure walkways are well lit. • Take calcium and vitamin D supplements if prescribed by your doctor. • You may have regular tests to check your bones both before and during treatment. • Tell your doctor or nurse if you get any of the signs or symptoms listed above.

General advice for people having cancer treatment

Blood clot risk

- Cancer and anticancer drugs can increase the risk of a blood clot (thrombosis).
- Tell your doctor if you have a family history of blood clots.
- A blood clot can cause pain, redness, swelling in your arms or legs, shortness of breath or chest pain.
- If you have any of these symptoms go to your nearest hospital Emergency Department.

Medications and vaccinations

- Before you start treatment, tell your doctor about any medications you are taking, including vitamins or herbal supplements.
- Don't stop or start any medications during treatment without talking to your doctor and pharmacist first.
- Vaccinations such as flu and tetanus vaccines are safe to receive while you are having treatment. If you are unsure, check with your doctor before you have any vaccinations.

Other medical and dental treatment

- If you go to hospital or any other medical appointment (including dental appointments), always tell the person treating you that you are receiving anticancer drugs.
- Before you have any dental treatment, talk to your doctor.

Diet

- While you are receiving this treatment it is important that you try to maintain a healthy diet.
- Speak to your doctor or nurse about whether drinking alcohol is safe with your treatment.
- If you have any concerns about recent weight loss or weight gain or questions about your diet, ask to speak to a dietitian.

Fertility

- Some cancer treatments can reduce your fertility. This can make it difficult or impossible to get pregnant.
- Talk to your doctor or nurse before you start any treatment. Depending on your situation there may be fertility sparing options available to you and/or your partner, discuss these with your doctor or nurse.

Pregnancy and breastfeeding

- Some cancer treatments can be dangerous to unborn babies. Talk to your doctor or nurse if you think there is any chance that

you could be pregnant.
- Do not try to get pregnant or father a child during this treatment. Contraception should be used during treatment and after stopping treatment. Hormonal contraception (such as pills, injections or patches) should not be used in women having this treatment. Ask your doctor or nurse about what type of contraception you should use.
- If you are planning pregnancy/fatherhood after completing this treatment, talk to your doctor. Some doctors advise waiting between 6 months and 2 years after treatment.
- Do not breastfeed if you are on this treatment, as anti-cancer medications can also pass into breast milk.

Sex life and sexuality

- The desire to have sex may decrease as a result of this treatment or its side effects.
- Your emotions and the way you feel about yourself may also be affected by this treatment.
- It may help to discuss your concerns with your partner and doctor or nurse.

Quitting smoking

- It is never too late to quit smoking. Quitting smoking is one of the best things you can do to help your treatment work better.
- There are many effective tools to improve your chances of quitting.
- Talk to your treating team for more information and referral to a smoking cessation support service.

Staying active

- Research shows that exercise, no matter how small, has many benefits for people during and after cancer treatment.
- Talk to your doctor before starting an exercise program. Your doctor can advise whether you need a modified exercise program.

For more information about cancer treatment, side effects and side effect management see our Patient and carers section.

Where to get more information

Telephone support

- Call Cancer Council on 13 11 20 for cancer information and support.

Breast cancer information

- Australasian Lymphology Association – lymphoedema.org.au
- Australasian Menopause Society – menopause.org.au
- Breast Cancer Network Australia – bcna.org.au
- National Breast Cancer Foundation – nbcf.org.au
- YWCA Encore breast cancer exercise program – ywcaencore.org.au

General cancer information and support

- Australian Rare Cancer (ARC) Portal – arcportal.org.au/
- Beyondblue – beyondblue.org.au
- Cancer Australia – canceraustralia.gov.au
- Cancer Council Australia – cancer.org.au
- Cancer Voices Australia – cancervoicesaustralia.org
- CanTeen – canteen.org.au
- Carers Australia – carersaustralia.com.au
- CHILL Cancer related hair loss – scalpcooling.org
- eviQ Cancer Treatments Online – eviQ.org.au
- LGBTQI+ People and Cancer - cancercouncil.com.au/cancer-information/lgbtqi
- Look Good Feel Better – lgfb.org.au
- Patient Information – patients.cancer.nsw.gov.au
- Radiation Oncology Targeting Cancer – targetingcancer.com.au
- Redkite – redkite.org.au
- Return Unwanted Medicines – returnmed.com.au
- Staying active during cancer treatment – patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/staying-active

Quit smoking information and support

Quitting smoking is helpful even after you have been diagnosed with cancer. The following resources provide useful information and support to help you quit smoking. Talk to your treating team about any other questions you may have.

- Call Quitline on 13 QUIT (13 78 48)
- iCanQuit – iCanQuit.com.au
- Patient Information – patients.cancer.nsw.gov.au/coping-with-cancer/physical-wellbeing/quitting-smoking
- Quitnow – quitnow.gov.au

Additional notes:

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