Queensland Government

Computed Tomography (CT) Scan During Pregnancy Consent

Facility: .....

(Affix identification label here)

URN:

Family name:

Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

A. Does the patient have capacity to provide consent?

Complete for ADULT patient only

☐ Yes ➔ ***GO TO** section B*

☐ No ➔ ***COMPLETE** section A*

You must adhere to the Advance Health Directive (AHD), or if there is no AHD, the consent obtained from a substitute decision-maker in the following order: Category 1. Tribunal-appointed guardian; 2. Enduring Power of Attorney; or 3. Statutory Health Attorney.

Name of substitute decision-maker:

Category of substitute decision-maker:

Complete for CHILD/YOUNG PERSON patient only

☐ Yes Although the patient is a child/young person, the patient may be capable of giving informed consent and having sufficient maturity, understanding and intelligence to enable them to fully understand the nature, consequences and risks of the proposed procedure and the consequences of non-treatment – 'Gillick competence' (*Gillick v West Norfolk and Wisbech Area Health Authority* [1986] AC 112)

➔ ***GO TO** section B*

☐ No Parent/legal guardian/other person* with parental rights and responsibilities to provide consent and complete this form

➔ ***COMPLETE** section A*

*Formal arrangements, such as parenting/custody orders, adoption, or other formally recognised carer/guardianship arrangements. Refer to the Queensland Health 'Guide to Informed Decision-making in Health Care' and local policy and procedures. Complete the source of decision-making authority as applicable below.

If applicable, source of decision-making authority *(tick one)*:

☐ Court order ➔ ◯ Court order verified

☐ Legal guardian ➔ ◯ Documentation verified

☐ Other person ➔ ◯ Documentation verified

Name of parent/legal guardian/other person:

Relationship to child/young person:

B. Is an interpreter required?

☐ Yes ☐ No

If *yes*, the interpreter has:

☐ provided a sight translation of the informed consent form in person

☐ translated the informed consent form over the telephone

It is acknowledged that a verbal translation is usually a summary of the text on the form, rather than word-by-word translation.

Name of interpreter:

Interpreter code: Language:

C. Patient *OR* substitute decision-maker *OR* parent/ legal guardian/other person confirms the following procedure(s)

I confirm that the referring doctor/clinician has explained that I have been referred for the following procedure:

Computed Tomography (CT) scan during pregnancy: ☐ Yes

Intravenous (I.V.) iodinated contrast: ☐ Yes ☐ No

☐ Estimated fetal or embryo radiation dose 1mSv or greater

- ◯ CT abdomen
- ◯ CT pelvis
- ◯ CT lumbar spine
- ◯ CT Kidney Ureter Bladder (KUB)
- ◯ Other (where fetal or embryo dose is 1mSv or greater):

☐ Estimated fetal or embryo dose has been obtained from a Medical Physicist and recorded below:

OR

☐ Estimated fetal or embryo dose for the unborn baby is **not** able to be been obtained from a Medical Physicist prior to the radiation procedure and a delay in obtaining fetal or embryo dose estimations may impact patient outcomes and/or diagnosis. Using published dose estimates, the estimated fetal or embryo dose would likely be:

Source (e.g. Australian Radiation Protection and Nuclear Safety Agency [ARPANSA]):

Name of referring doctor/clinician:

D. Risks specific to the patient in having a Computed Tomography (CT) scan during pregnancy

(Doctor/clinician to document additional risks not included in the patient information sheet):

DO NOT WRITE IN THIS BINDING MARGIN

CT SCAN DURING PREGNANCY CONSENT

v1.00
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SW9576

Queensland Government

Computed Tomography (CT) Scan During Pregnancy Consent

(Affix identification label here)

URN:

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Given name(s):

Address:

Date of birth: Sex: ☐ M ☐ F ☐ I

E. Risks specific to the patient in *not* having a Computed Tomography (CT) scan during pregnancy

(Doctor/clinician to document specific risks in not having a Computed Tomography [CT] scan during pregnancy):

F. Alternative procedure options

(Doctor/clinician to document alternative procedure not included in the patient information sheet):

G. Information for the doctor/clinician

The information in this consent form is not intended to be a substitute for direct communication between the doctor/clinician and the patient *OR* substitute decision-maker *OR* parent/legal guardian/other person.

I have explained to the patient *OR* substitute decision-maker *OR* parent/legal guardian/other person the contents of this form and am of the opinion that the information has been understood.

Name of doctor/clinician:

Designation:

Signature: Date:

H. Patient *OR* substitute decision-maker *OR* parent/legal guardian/other person consent

I acknowledge that the doctor/clinician has explained:

- the 'Computed Tomography (CT) Scan During Pregnancy' patient information sheet
- the medical condition and proposed treatment, including the possibility of additional treatment
- the specific risks and benefits of the procedure
- the prognosis, and risks of not having the procedure
- alternative procedure options
- that there is no guarantee the procedure will improve the medical condition
- that if a life-threatening event occurs during the procedure:
  - an adult patient will be treated based on documented discussions (e.g. AHD or ARP [Acute Resuscitation Plan])
  - a child/young person's health care will be provided in accordance with good clinical practice and in the best interests of the patient
- that a doctor/clinician other than the consultant/specialist may assist with/conduct the clinically appropriate procedure; this may include a doctor/clinician undergoing further training under supervision
- that if the doctor/clinician wishes to record video, audio or images during the procedure where the recording is not required as part of the treatment (e.g. for training or research purposes), I will be asked to sign a separate consent form. If I choose not to consent, it will not adversely affect my access, outcome or rights to medical treatment in any way.

I was able to ask questions and raise concerns with the doctor/clinician.

I understand I have the right to change my mind regarding consent at any time, including after signing this form *(this should be in consultation with the doctor/clinician)*.

I/substitute decision-maker/parent/legal guardian/other person have received the following consent and patient information sheet(s):

☐ 'Computed Tomography (CT) Scan During Pregnancy'

On the basis of the above statements,

1) I/substitute decision-maker/parent/legal guardian/other person consent to having a Computed Tomography (CT) scan during pregnancy.

Name of patient/substitute decision-maker/parent/legal guardian/other person:

Signature: Date:

If the patient is a child/young person:

☐ I am not aware of any legal or other reason that prevents me from providing unrestricted consent for this child/young person for this procedure *(not applicable if the child/young person is Gillick competent and signs this form)*.

2) Student examination/procedure for professional training purposes:

For the purpose of undertaking training, a clinical student(s) may observe medical examination(s) or procedure(s) and may also, subject to patient *OR* substitute decision-maker *OR* parent/legal guardian/other person consent, assist with/conduct an examination or procedure on a patient while the patient is under anaesthetic.

I/substitute decision-maker/parent/legal guardian/other person consent to a clinical student(s) undergoing training to:

- observe examination(s)/procedure(s) ☐ Yes ☐ No
- assist with examination(s)/procedure(s) ☐ Yes ☐ No
- conduct examination(s)/procedure(s) ☐ Yes ☐ No

Computed Tomography (CT) Scan During Pregnancy

Adult and Child/Young Person | Informed consent: patient information

Queensland Government

A copy of this patient information sheet should be given to the patient or substitute decision-maker or parent/legal guardian/other person of a child or young person to read carefully and allow time to ask any questions about the procedure. The consent form and patient information sheet should be included in the patient's medical record.

In this information sheet, the word 'you' means the patient unless a substitute decision-maker, parent, legal guardian or other person is providing consent on behalf of the patient, in which case the word 'you' means the substitute decision-maker, parent, legal guardian or other person when used in the context of the person providing consent to the procedure.

Uncertainty around pregnancy status

If there is uncertainty around your pregnancy status, a urine or blood test may need to be performed, with your consent. If your pregnancy status cannot be confirmed the Medical Imaging staff will obtain further advice and consult with a radiologist (doctor).

1. What is a Computed Tomography (CT) scan during pregnancy and how will it help me?

Computed Tomography (CT) are special scans that produce cross-sectional images of the body using ionising (x-ray) radiation. Ionising radiation is higher energy radiation that can interact with the material it is travelling through, for example the human body.

CT is used when your doctor/clinician needs more information than a plain x-ray can provide. The CT machine looks like a large doughnut with a narrow table in the middle. The table moves through the circular hole in the centre of the scanner. The CT machine is open at both ends. The information from the CT scan may help provide a diagnosis and/or information on your condition.

Image: A patient undergoing a CT scan is assisted by a radiographer. ID: 1586722561. www.shutterstock.com

It is important to tell Medical Imaging department staff how many weeks pregnant you are, as the risk varies depending on the stage of pregnancy, procedure, body part, and whether intravenous (I.V.) iodinated contrast is required. An unborn baby is more sensitive to medical radiation than adults. However, risks from CT scans are still very low. CT scans in which the radiation does not pass through the unborn baby (for example, CT scan of the brain) do not pose a risk to the unborn baby as the radiation exposure is very low. CT scans in which the radiation does pass directly through an unborn baby (for example, CT scan of the abdomen or pelvis) have a higher radiation risk.

Non-urgent CT scans that directly expose the unborn baby should be delayed until after giving birth. However, sometimes there may be good reasons to perform a CT scan to enable the best care for you, which in turn benefits the unborn baby.

In requesting this procedure, your doctor/clinician has determined that the risks of not having the CT scan outweigh the risks to you and your unborn baby.

Contrast

Iodinated contrast is used during a CT scan so that your internal organs and structures can be seen more clearly in the images. Contrast is generally safe during pregnancy. However, due to the risk of hypothyroidism (low thyroid hormone) for the unborn baby, contrast should only be given after careful consideration and a discussion with the radiologist (doctor).

Preparing for the procedure

The Medical Imaging department will give you instructions on how to prepare for the procedure. It is important to follow the instructions that are given to you. Your procedure might be delayed if you don't follow all of the preparation steps.

The CT scan itself will not cause you any pain.

It is very important you lie still for the CT scan. Supporting straps, foam pads and light weights may be used to help with this.

During the procedure

You may be required to change into a hospital gown and remove some of your jewellery.

If contrast needs to be given, it is given through an intravenous (I.V.) cannula. An I.V. cannula is a small plastic tube which will be inserted into a vein, usually in your hand or arm.

When the contrast is injected you may feel:
- a very warm or 'flushed' feeling over your body, and you may think you have passed urine. You will not pass urine – it is only a feeling
- a 'metallic' taste or smell. This usually lasts less than a minute.

You will be positioned on the CT table by a radiographer. The radiographer will not be in the room during the scan, but they will be able to see you, through a large glass window, and speak with you via an intercom.

During the scan, the table will move through the CT scanner and a whirring or humming sound may be heard. You should remain as still as possible, as the slightest movement can blur the pictures. For some scans, you will be asked to hold your breath for up to 20 seconds. The whole CT scan takes approximately 5 to 20 minutes depending on which part of the body is being scanned.

If you had an I.V. cannula and it is no longer required, it will be removed.

You may be asked to wait in the department, under observation, for up to half an hour after the I.V. contrast has been given.

2. What are the risks?

In recommending the procedure, the doctor/clinician believes that the benefits to you from having the procedure exceed the risks involved. There are risks and possible complications associated with the procedure which can occur with all patients – these are set out below. There may also be additional risks and possible complications specific to your condition and circumstances which the doctor/clinician will discuss with you. If you have any further concerns, please ensure that you raise them with the doctor/clinician prior to giving consent to the procedure.

Common risks and complications
- *(I.V. iodinated contrast only)* minor pain, bruising and/or infection from the I.V. cannula
- *(I.V. iodinated contrast only)* bruising is more common if you have been taking blood thinning medicines, such as warfarin, aspirin, clopidogrel (Plavix, Iscover, Coplavix), prasugrel (Effient), dipyridamole (Persantin or Asasantin), ticagrelor (Brilinta), apixaban (Eliquis), dabigatran (Pradaxa), rivaroxaban (Xarelto) or complementary/alternative medicines, such as fish oil and turmeric.

Uncommon risks and complications
- the procedure may not be possible due to medical and/or technical reasons
- *(I.V. iodinated contrast only)* injected contrast may leak outside of the blood vessel under the skin and into the tissues. This may require treatment. In very rare cases, further surgery could be required if the skin breaks down.

Rare risks and complications
- *(I.V. iodinated contrast only)* allergic reactions rarely occur but when they do, they usually occur within the first hour, with most happening in the first 5 minutes. Late reactions have been known to occur up to a week after the injection. Note: Allergy to topical iodine and/or seafood does not imply an allergy to iodinated contrast. The reactions vary from:
  - » mild – hives, sweating, sneezing, coughing, nausea

  - » moderate – widespread hives, headaches, facial swelling, vomiting, shortness of breath
  - » severe – severe reactions are rare but include life-threatening heart palpitations, very low blood pressure, throat swelling, seizures and/or cardiac arrest
- death because of a CT scan is very rare.

There are no common or uncommon risks for your unborn or breastfeeding baby.

Rare risks and complications for the unborn baby include:

- *(I.V. iodinated contrast only)* Reduced functioning of the thyroid gland of the unborn baby or newborn. After your baby is born, they will have a thyroid function test in the first few days of life. All newborn babies in Australia have this test.
- There is a very small increase in the risk of your unborn child developing a childhood cancer if you have a CT scan of the abdomen when pregnant. If the CT is over any body part except the abdomen, there is a very small change in risk. The table below shows the natural chance of a child not developing cancer by the age of 18, as well as the chance if the pregnant person has a CT scan (over the abdomen and any other body part) when the unborn baby is in utero.

Event	Chance of unborn baby NOT developing cancer by the age of 18 years
No CT scan	99.8%
CT scan of any body part (except abdomen)	99.8%
CT scan of abdomen	99.6%

Reference: Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). Ionising radiation in our everyday environment, 2021. www.arpansa.gov.au

- death of an unborn baby because of a CT scan is very rare.

The health risk to you and your unborn baby, of not having the CT scan, may be greater than the risk of harm to your unborn baby from the CT scan.

Contrast precautions

As contrast is not suitable for some people, you will be asked a series of questions before the contrast is given. The answers allow your doctor/clinician to identify any risk factors that you may have.

Risk to kidney function

Contrast is removed from the blood by the kidneys through the urine. Modern contrast used in CT scanning is minimally, if at all, harmful to the kidneys. CT scans with contrast can be safely performed in patients with kidney disease as clinical studies have not proven increased risk of worsened kidney function or increased need for dialysis[1].

When significant worsening of kidney function is seen, there is often more than one factor causing stress to the kidneys such as certain medications, infection, dehydration or low blood pressure.

To minimise stress to your kidneys your doctor/clinician may recommend you have extra fluid to ensure good hydration, stop some medications temporarily or have extra blood tests to monitor your kidney function around the time of your CT scan with contrast.

You may be asked to have a blood test to find out how well your kidneys are functioning.

Risks of radiation

The risks of radiation exposure from this procedure need to be compared to the risks of your condition not being treated. Exposure to radiation may cause a slight increase in the risk of cancer to you over your lifetime. However, the potential risk is small compared to the expected benefit of this procedure[2].

What are the risks of not having a CT scan during pregnancy?

There may be adverse consequences for your health if you choose not to have the proposed procedure. Please discuss these with the referring doctor/clinician.

If you choose not to have the procedure, you will not be required to sign a consent form.

If you have signed a consent form, you have the right to change your mind at any time prior to the procedure. Please contact the doctor/clinician to discuss.

3. Are there alternatives?

Depending on what the doctors hope to diagnose, Magnetic Resonance Imaging (MRI) or ultrasound may be a suitable alternative. Neither MRI nor ultrasound use ionising radiation, and are considered safe alternatives. The number of weeks of your pregnancy may also affect the suitability of these alternatives.

Making the decision to have a procedure requires you to understand the options available. Please discuss any alternative procedure options with your doctor/clinician before signing the consent form.

4. What should I expect after the procedure?

If you had I.V. contrast, it is recommended you drink 2 to 4 glasses of water after the CT scan to help remove contrast from your body.

Contrast will not affect your ability to carry out normal activities; you should be able to continue with your day as normal.

The radiologist (doctor) will review the final images after the scan and send the report to your treating team.

You will receive the results of the scan from your treating team at your next follow-up appointment. Please make an appointment if you do not already have one.

If you received contrast and are breastfeeding, there is no reason to stop breastfeeding or discard your breastmilk for any period of time. Your milk will not harm your baby.

5. Who will be performing the procedure?

Radiographers, doctors, nuclear medicine technologists, sonographers, nurses, and medical imaging assistants make up the medical imaging team. All or some of these professionals may be involved in your procedure.

A doctor/clinician other than the consultant/specialist may assist with/conduct the clinically appropriate procedure. This could include a doctor/clinician undergoing further training, however all trainees are supervised according to relevant professional guidelines.

If you have any concerns about which doctor/clinician will be performing the procedure, please discuss this with the doctor/clinician.

For the purpose of undertaking professional training in this teaching hospital, a clinical student(s) may observe medical examination(s) or procedure(s) and may also, subject to your consent, assist with/conduct an examination or procedure on you.

You are under no obligation to consent to an examination(s) or a procedure(s) being undertaken by a clinical student(s) for training purposes. If you choose not to consent, it will not adversely affect your access, outcome or rights to medical treatment in any way.

For more information on student care, please visit www.health.qld.gov.au/consent/students.

6. Where can I find support or more information?

Hospital care: before, during and after is available on the Queensland Health website www.qld.gov.au/health/services/hospital-care/before-after where you can read about your healthcare rights.

Further information about informed consent can be found on the Informed Consent website www.health.qld.gov.au/consent. Additional statewide consent forms and patient information sheets are also available here.

Staff are available to support patients' cultural and spiritual needs. If you would like cultural or spiritual support, please discuss this with your doctor/clinician.

Queensland Health recognises that First Nations People's culture must be considered in the patient's clinical care to ensure their holistic health and individual needs are met.

7. Questions

Please ask the doctor/clinician if you do not understand any aspect of this patient information sheet or if you have any questions about your proposed procedure.

If you have further questions prior to your appointment, please contact the Medical Imaging department via the main switchboard of the facility where your procedure is booked.

8. Contact us

In an emergency, call Triple Zero (000).

If it is not an emergency, but you have concerns, contact 13 HEALTH (13 43 25 84), 24 hours a day, 7 days a week.

References:
1. Davenport MS, Perazella MA, Yee J, et al. Use of Intravenous Iodinated Contrast Media in Patients with Kidney Disease: Consensus Statements from the American College of Radiology and the National Kidney Foundation. Radiology 2020;294:660–668.
2. Australian Radiation Protection and Nuclear Safety Agency (ARPANSA). Ionising radiation in our everyday environment, 2021. Available from www.arpansa.gov.au