Diagnostic Imaging

COMPUTED TOMOGRAPHY (CT)
CONSULTATION REQUEST

Guidelines:

1. Physician to complete requisition. Incomplete requisitions will be returned.
2. Fax requisition to CT Booking Clerk at **807-684-5853**.
3. Fax ALL Regional Referrals to Regional Booking Office at **807-684-5907**.
4. If there is relevant prior imaging from outside facilities, please provide reports with requisition.

Patient Name ______________________
Last Name First Name
Date of Birth ____________ Sex ☐ Male ☐ Female
Day/Month/Year
Health Card ____________ Version Code ______
Address ______________________
City ____________ Postal Code ______
Telephone Home (_____) ________
Business (_____) ________ Cell (_____) ________
☐ Workplace Safety Insurance Board Claim Number ______________________
☐ Other Insurance Claim Number ______________________

CT Exam Requested – Please be specific / specify levels

☐ Thorax ☐ Head ☐ Cervical Spine ________
☐ Abdomen ☐ Sinus ☐ Thoracic Spine ________
☐ Pelvis ☐ Neck ☐ Lumbar Spine ________
☐ Renal Colic ☐ CT Angio ________
☐ Other ________
☐ **CT Biopsy/Drainage**
INR ______ Hemoglobin ______ Date Obtained
PTT ______ Platelets ______ ______

Clinical Information

____
____
____
____
____
____

☐ Cancer Staging and/or Diagnosis
☐ Other

Relevant Previous Treatments/Studies	Date	Where
☐ Previous Chemotherapy		
☐ Previous Radiotherapy		
☐ MRI (Magnetic Resonance Imaging)		
☐ CT (Computed Tomography)		
☐ Ultrasound		
☐ X-Ray		
☐ Nuclear Medicine		
☐ Angiography		

Priority (P) Assessment

☐ 1 -Immediate - Emergent
☐ 2 -Within 48 Hours-Inpatient/Urgent
☐ 3 -Within 10 Days - Semi-Urgent
☐ 4 -Within 4 Weeks - Non-Urgent
☐ Greater than 4 Weeks - Date ________

Radiologist Use Only

☐ **P1** ☐ **P2** ☐ **P3** ☐ **P4**

Referring Physician ______________________
Referring Site or Clinic ______________________
Copy Report to ______________________
Physician's Signature ×______________________
Date ______________________

Risk factors for acute or chronic renal impairment and/or development of Contrast Induced Nephropathy

Diabetes Mellitus	☐ Yes ☐ No
• Is patient on **Metformin**? (see reverse)	☐ Yes ☐ No
Renal disease or solitary kidney	☐ Yes ☐ No
Sepsis or acute hypotension	☐ Yes ☐ No
Elderly (greater than 70 years of age)	☐ Yes ☐ No
Dehydration or volume contraction	☐ Yes ☐ No
Vascular disease (see reverse side)	☐ Yes ☐ No
Nephrotoxic drugs (see reverse side)	☐ Yes ☐ No
Previous chemotherapy	☐ Yes ☐ No
Human immunodeficiency syndrome or acquired Immunodeficiency syndrome	☐ Yes ☐ No
Collagen Vascular Disease (see reverse side)	☐ Yes ☐ No
Organ transplant	☐ Yes ☐ No

If any risk factors are present, an eGFR evaluation must be performed prior to iodinated contrast exam.

eGFR (estimated Glomerular Filtration Rate) ________
Date of blood test ________
(Please specify if pending)
Is patient on dialysis? ☐ Yes ☐ No

(See Thunder Bay Regional Health Sciences Centre Guidelines on reverse side for Screening and Prevention of Contrast Nephropathy).

Allergies

Allergy to IV contrast media containing iodine? ☐ Yes ☐ No
• Will patient be pre-medicated? ☐ Yes ☐ No
Allergy to medications? ☐ Yes ☐ No
• Please list ________
Other severe allergies ________

(See protocol on reverse side).

INCOMPLETE AND/OR UNSIGNED REQUISITIONS WILL BE RETURNED.

GUIDELINES FOR SCREENING AND PREVENTION OF CONTRAST INDUCED NEPHROPATHY
(Adapted from the Canadian Association of Radiologists - Webpage: http://www.car.ca)

CONTRAST INDUCED NEPHROPATHY (CIN) is an acute deterioration of renal function that occurs 24 to 48 hours following injection of iodinated contrast media for CT scans, angiograms and venograms. The most important risk factor is pre-existing renal impairment, particularly Diabetic Nephropathy.

FOR PATIENTS WITH 1 OR MORE RISK FACTORS for impaired renal function, an eGFR (estimated Glomerular Filtration Rate) will be required prior to an intravenous contrast CT examination. For outpatient tests, the eGFR must be acquired within **1 month** of CT Scan; within **48 hours** for in-patients. In emergent situations, eGFR may be waived – proceed with intravascular volume expansion.

<table>
<tr><th>ALL PATIENTS with eGFR 30-45 ml/min/1.73 m^2</th><th>PATIENTS with eGFR less than 30 ml/min/1.73 m^2</th></tr>
<tr><td>Ensure adequate Intravenous saline hydration (see below)

Intravenous Hydration for Contrast Study:
• For inpatients – intravenous saline 1 ml/kg/h for twelve (12) hours prior to procedure and twelve (12) hours post procedure.
• For fluid loading for same day scan – intravenous saline 1-2 ml/kg/hr three (3) – six (6) hours prior to procedure and six (6) hours post procedure.
• For rapid volume expansion, consider – sodium bicarbonate 3 amps (150 meq) in 850 ml D5W at 3 ml/kg/h for one (1) hour before contrast administration and at 1 ml/kg/h for six (6) hours after contrast administration.</td><td>Consider alternate imaging modalities.

If a contrast enhanced CT scan is considered diagnostically necessary, hydrate patient.

Consider post scan dialysis.</td></tr>
<tr><td>Follow-up Renal Function test at 2 days</td><td>Follow-up Renal Function tests at 2 and 5 days</td></tr>
<tr><td colspan="2">Hold nephrotoxic drugs 48 hours prior to contrast when possible. (Nephrotoxic Drugs include: loop diuretics, amphotericin B, aminoglycosides, vancomycin, non-steroidal anti-inflammatory drugs, cancer and immune suppressant chemotherapy)
Vascular disease: hypertension, congestive heart disease, cardiac or peripheral vascular disease
Collagen Vascular Disease: a heterogeneous group of autoimmune disorders of unknown etiology. They include systemic lupus erythematosus (SLE), rheumatoid arthritis (RA), progressive systemic sclerosis (PSS), scleroderma (SD), dermatomyositis (DM)/polymyositis (PM), ankylosing spondylitis (AS), Sjögren syndrome (SS), and mixed connective-tissue disease (MCTD).</td></tr>
<tr><td colspan="2">Hold diuretics especially Furosemide at least 24 hours prior to contrast, when possible.</td></tr>
<tr><td colspan="2">Avoid repeat contrast studies for 3-10 days, if possible</td></tr>
</table>

PRESCRIPTION OF CONTRAST:

If the eGFR greater than 45 mL/min/1.73 m^2, unless otherwise requested, contrast will be prescribed at the radiologists' discretion.

If the eGFR is between 30-45 mL/min/1.73 m^2, unless otherwise requested, contrast will be prescribed at the radiologists' discretion.
Please ensure to follow the above recommendations.

If the eGFR is less than 30 mL/min/1.73 m^2, contrast will not be prescribed unless the case is discussed with the radiologist.

If the patient has a risk for contrast nephropathy and no eGFR is provided, the study will either be performed without contrast or postponed, if contrast is considered necessary for diagnostic purposes. If the eGFR is pending, upon receiving the eGFR value, the referring physician will be contacted by facsimile to confirm.

EVALUATION OF FOLLOW-UP RENAL FUNCTION TESTS IS THE RESPONSIBILITY OF THE ORDERING PHYSICIAN.

METFORMIN PROTOCOL:

Hold Metformin on day of contrast study and for 48 hours post contrast. Restart Metformin if repeat renal function test demonstrates stability of renal function (less than 25 per cent increase compared to baseline function).

CONTRAST MEDIA ALLERGY PREMEDICATION (See Guidelines: http://www.car.ca)

- Prednisone 50 milligrams orally, thirteen (13), seven (7) and one (1) hour prior to study
- Diphenhydramine (Benadryl) 50 milligrams orally one (1) hour prior to study

BREASTFEEDING PATIENTS

It is recommended that patients who have had an injection of contrast media should stop breastfeeding for 24 hours after their CT scan. Patients should pump and discard breast milk during these 24 hours. Patients should consider pumping and saving breast milk prior to the scan.

Abbreviation Legend: **INR** – International Normalized Ratio; **PTT** – Partial Thromboplastin Time; **ml** – milliliter; **min** – minute; **m^2**- metre squared; **kg** – kilogram; **h** – hour; **meq** - milliequivalent