

## Department of Diagnostic Radiology and Nuclear Medicine

### **PATIENT INFORMATION SHEET** **TREATMENT OF THYROID CANCER WITH RADIOACTIVE IODINE**

**General Indications for the Procedure:** Radioactive iodine-131 (I-131, also called radioiodine) is used to treat thyroid cancer. Most patients with thyroid cancer have surgery to remove their thyroid glands. However, it is very difficult to remove 100% of the gland without damaging important nerves. Therefore, radioiodine is used after surgery to destroy whatever thyroid tissue could not be surgically removed. In addition, radioiodine can be used to destroy suspected or known metastatic thyroid cancer.

**Description of the Procedure:** Patients to be treated for thyroid cancer with radioiodine are evaluated beforehand to determine whether or not they may return home on the day of treatment. Most patients who receive radioiodine for thyroid cancer will be allowed to go home. However, some patients must remain in the hospital for one (unusually two) days after therapy. When ready for treatment, the patient swallows one or two capsules containing radioactive iodine. Once swallowed, the radioactive iodine is taken up and stored by functional thyroid tissue. Radioactive iodine stored in thyroid tissue provides an internal radiation treatment that kills the tissue. While this is a generally safe procedure, certain precautions are taken routinely after treatment with radioiodine.

**Risks of the Procedure:** Although radioactive iodine therapy for thyroid cancer is considered very safe, certain serious and minor ill effects may occur. Common complications include nausea and vomiting for several days and injury to the salivary glands, resulting in soreness and dryness of the mouth for several days. Some patients develop neck swelling and pain. Patients who receive very large, repeated doses of radioiodine for thyroid cancer have a very rare risk of developing leukemia. There is a very rare risk of developing significant bone marrow depression, in which the bone marrow does not produce enough blood cells. If this were to occur, blood transfusions might be necessary. However the bone marrow would be expected to recover. There is a very slight increase in birth defects when pregnant women are treated with radioiodine. For this reason, women must not be pregnant if they are to receive this treatment, and they must not become pregnant for 6 months after receiving radioiodine.

**Alternatives to the Procedure:** Alternatives for treatment of thyroid cancer may be available, including treatment with chemotherapy.

**Probable Consequences of Refusing the Procedure:** Refusing treatment with radioiodine may increase the risk of developing metastatic tumor, if it is not already present. If metastatic thyroid cancer is present, refusing treatment with radioiodine removes the opportunity to destroy the metastases and keep them from growing.

**Persons Performing the Procedure:** The key portions of the procedure will be performed by an attending physician who is a member of the medical staff of Rush University Medical Center, or a resident or fellow in radiology or nuclear medicine who will be observed and supervised by a member of the medical staff. Residents are licensed physicians in an approved residency program. Fellows are licensed physicians who have completed a residency in radiology and are in an approved post-residency training program. The parts of the procedures residents or fellows will perform will be based on their level of training and competence.

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