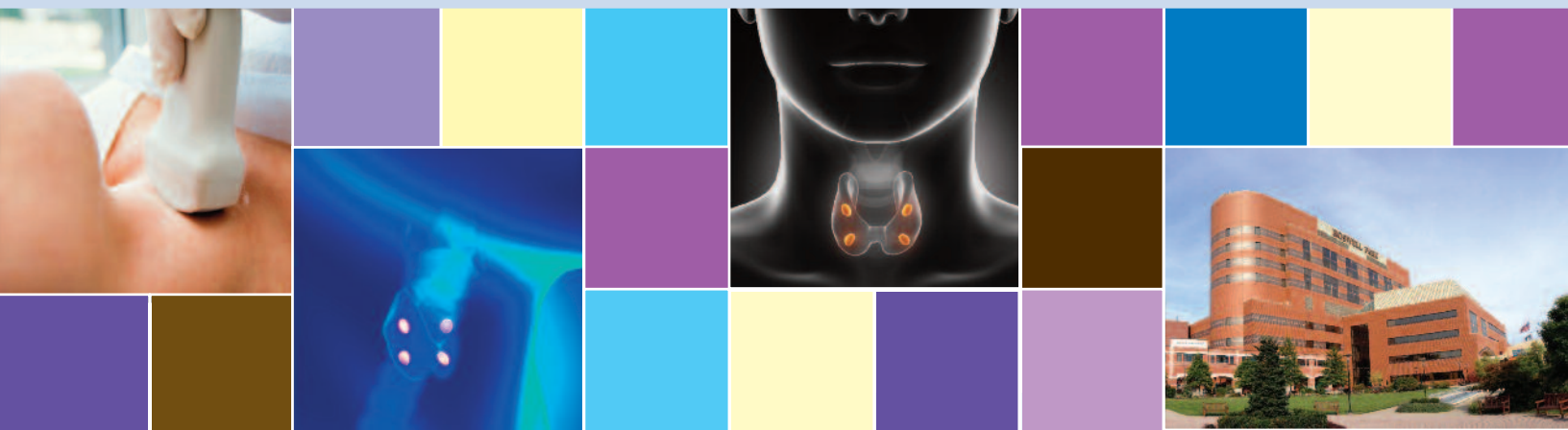


Endocrine Surgery for Hyperparathyroidism



RPCI is a high-volume center for parathyroidectomies

Studies show that patients treated at high-volume centers have better outcomes.

For parathyroidectomies, a high-volume center is defined as one that performs more than 50 of these surgeries per year. In 2013, Roswell Park surgeons performed 99 parathyroidectomies.

RPCI's advanced methods help our surgeons cure hyperparathyroidism the very first time.

In about 85% of patients with primary hyperparathyroidism (PHP), only one of the four parathyroid glands is abnormal, usually due to a benign tumor, or adenoma. If the abnormal gland is removed, the PHP will be cured and symptoms will disappear. But if more than one gland is abnormal and only one is removed, re-surgery may be necessary.

Identification and localization of malfunctioning glands can be challenging, especially in patients with ectopic glands. RPCI employs two advanced procedures to eliminate the need for future reoperation: 1) pre-surgery imaging using 4-D CT scans with volume rendering and 2) intraoperative parathyroid hormone testing (IOPHT).

Two steps to greater surgical accuracy

1) RPCI is among very few institutions with the advantage of pre-surgery imaging using 4-dimensional CT scans with volume rendering. This enables surgeons to zero in on the abnormal gland(s) and plan the best route for excision. Volume rendering makes it possible to create a 3-D image of the abnormalities on the parathyroid glands, to pinpoint their location.

2) While the patient is still in surgery, we combine information from the 4-dimensional CT scan with intraoperative parathyroid hormone testing (IOPH) to ensure that all abnormal parathyroid glands have been successfully removed.

Here's how it works: Excess parathyroid hormone (PTH) produced by the abnormal gland disappears from the blood very quickly after the gland is removed—usually in five to ten minutes. So, after the surgeon removes a gland that has been identified as abnormal, the surgical team waits 10 minutes and then measures the patient's PTH blood levels.

If the PTH falls by 50% to within the normal range, the team knows that all malfunctioning parathyroid glands have been removed; in 98% of such cases, the patient is cured. If the PTH level is still too high, surgery continues until all glands are identified and IOPH indicates that all abnormal glands have been removed.

Superior imaging

A study by researchers at Roswell Park Cancer Institute demonstrated that 4-D CT scans with volume rendering were superior to other pre-surgical imaging—specifically ultrasound and the sestamibi SPECT (parathyroid scan)—in pinpointing the locations of abnormal parathyroid glands. Study results were presented at meetings of the American Association of Endocrine Surgeons (AAES) and the Society of Surgical Oncology (SSO) in 2012.

Meet the Team



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Refer a Patient

To refer a patient, please call 716-845-4614.

Consult a Physician

To confer with an RPCI physician about a patient with hyperparathyroidism, please call 716-845-4430.

**WE CAN'T LET
CANCER WIN.**

**THAT'S WHY
ROSWELL PARK
WILL NEVER
STOP FIGHTING.**

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