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**Lab Dept:**                    **Anatomic Pathology**

**Test Name:**                **LOSS OF HETEROZYGOSITY WILMS TUMOR**

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***General Information***

**Lab Order Codes:**        LOHW

**Synonyms:**                Loss of Heterozygosity (LOH) Wilms Tumor; Wilms Tumor LOH, Nephroblastoma LOH, Wilms Tumor, Wilms LOH, and 16q LOH

**CPT Codes:**                81479 – Molecular Pathology, Unlisted

**Test Includes:**             Loss of Heterozygosity (LOH) 1p & 16q

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***Logistics***

**Test Indications:**        Children with Wilms tumor have their tumors classified based on stage and histopathology. Many children with Wilms tumor will be enrolled in Children's Oncology Group (COG) protocols. Loss of Heterozygosity (LOH) for 1p or LOH for 16q may be associated with a poorer prognosis in Wilms tumor patients. LOH testing is currently not available through a COG trial and can be ordered clinically.

**Lab Testing Sections:**    Anatomic Pathology - Sendouts

**Referred to:**                Nationwide Children's Hospital - ChildLab

**Phone Numbers:**         MIN Lab: 612-813-6280

STP Lab: 651-220-6550

**Test Availability:**         24 hours, daily

**Turnaround Time:**        2 to 3 weeks

**Special Instructions:**     Please include a completed request form with the sample to the laboratory. [Nationwide Order Form](#), See the bottom of this page and open the Lab Form Link pdf.

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***Specimen***

**Specimen Type:**            A tumor sample and a normal (germline) sample is required.

**Tumor tissue type (one of the following):** Please note, at least 40% tumor must be present in the submitted tumor sample.

Banked COG sample (including COG number) (some cases may require

approval from the study chair); please call the laboratory to confirm sample availability.

Snap-frozen tumor tissue

Paraffin-embedded tumor tissue

OCT-embedded tumor. Sample submitted under a COG protocol can also be used in most cases (some cases may require approval from the study chair); please call the laboratory to confirm sample availability.

**Normal Sample Type (one of the following):**

Banked cog sample (include COG number)

Peripheral blood [4mL EDTA whole blood]

Other uninvolved tissue

**Container:** Sterile container required

**Draw Volume:** At least 40% tumor must be present in the submitted tumor sample. A tumor percentage <40% may be reported as unsatisfactory (no results reported). Pathology review by a ChildLab pathologist will be performed on submitted samples to verify tumor percentage.

The normal germline sample

**Processed Volume:** Same as Draw Volume

**Collection:** Outpatient: freeze immediately after collection. Immediately place on dry ice and transport frozen.

**Special Processing:** Lab Staff: Please call 1-614-722-2866 prior to shipping and provide tracking number. Ship for overnight delivery. Saturday deliveries are accepted. Please check "Saturday Delivery" on shipment label.

Send snap-frozen and OCT-embedded specimens on dry ice. Send peripheral blood and paraffin-embedded tissue at room temperature.

Please include Pathology reports, even if preliminary

**Patient Preparation:** None

**Sample Rejection:** Delayed or improper handling; inadequate tissue; tissue degradation; all specimens must be labeled with at least two patient identifiers; mislabeled or unlabeled specimen

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***Interpretive***

**Reference Range:** An interpretive report will be provided

**Critical Values:** N/A

**Limitations:** A tumor percentage <40% may be reported as unsatisfactory (no results reported).

**Methodology:** Capillary electrophoresis Microsatellite marker analysis Polymerase chain reaction (PCR)

**References:** [Nationwide Children's Laboratory](#) January 2016