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## Purpose

Metaiodobenzylguanidine (MIBG) is a substance that is taken up specifically by neuroblastoma, pheochromocytoma, or paraganglioma tumor cells. MIBG can be combined together with radioactive iodine ( $^{131}\text{I}$ ) in the laboratory to form the radioactive compound  $^{131}\text{I}$ -MIBG. The  $^{131}\text{I}$ -MIBG compound concentrates more in cancer cells than in normal cells, and may therefore deliver more radiation directly to cancer cells while sparing normal organs.

Arsenic trioxide is a drug that has been shown to kill neuroblastoma cells in the laboratory. It has been used safely in children and adults with various cancers. In laboratory studies, arsenic trioxide was more effective against cancer cells when given with radioactivity delivered specifically to the tumor.

The purpose of this research study is to assess the safety and effectiveness of the combination of  $^{131}\text{I}$ -MIBG and arsenic trioxide in patients with neuroblastoma, malignant pheochromocytoma, or malignant paraganglioma that has returned or is resistant to standard treatments.

A Pilot Phase II Study of Targeted Radiotherapy with  $^{131}\text{I}$ -MIBG and Arsenic Trioxide in Patients with Resistant Neuroblastoma or Malignant Chromaffin Cell Tumors

## Who Can Join

To be eligible for this study, patients must meet several criteria, including but not limited to the following:

Patients must have a diagnosis of neuroblastoma, malignant pheochromocytoma, or malignant paraganglioma that has returned or is resistant to standard treatments.

At least 2 weeks must have passed since prior biological therapy and 3 weeks since prior chemotherapy and entry into the trial.

Patients with neuroblastoma must be older than 1 year of age. Patients with malignant pheochromocytoma or malignant paraganglioma must be between the ages of 1 and 21.

For more information about this study and to inquire about eligibility, please contact 1- [833-MSK-KIDS](tel:833-MSK-KIDS).

## Contact

Modak Shakeel M.D.

## Protocol

04-148

## Phase

Phase II (phase 2)

## Investigator

[Ellen M. Basu](#)

## Co-Investigators

[Shakeel Modak](#)

[Neeta Pandit-Taskar](#)

## Diseases

[Neuroblastoma](#)

## Locations

[Memorial Sloan Kettering Cancer Center](#)

## ClinicalTrials.gov ID

NCT00107289

A Pilot Phase II Study of Targeted Radiotherapy with <sup>131</sup>I-MIBG and Arsenic Trioxide in Patients with Resistant Neuroblastoma or Malignant Chromaffin Cell Tumors

**ClinicalTrials.gov**

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