Study: NANT 2014-01

SF1126 for patients with Relapsed or Refractory Neuroblastoma

Protocol Title:
Phase I Study of SF1126 in Patients with Relapsed or Refractory Neuroblastoma

Study Chair: Steven DuBois, MD University of California – San Francisco

What is this study about:

This study involves the use of an experimental drug called SF1126 that has not been approved by the United States Food and Drug Administration (FDA). SF1126 blocks the function of proteins that are important in the growth of cancer cells and seems to affect Mycn, a protein important in neuroblastoma growth. SF1126 is considered experimental because it has not been proven to work in a situation like yours. SF1126 has been used in only a small number of adults so there is a lot we do not know about it yet. SF1126 has not previously been used in children. This study is called a phase I study because the goal is to find the highest dose of SF1126 that we can give safely. Once we have found out the highest dose of SF1126 that can be given safely, we will treat more neuroblastoma patients with this dose of SF1126 who are known to have changes of certain proteins called Myc and Mycn.

Why is this study being done:

- To find the highest dose of SF1126 that can be given without causing severe side effects.
- To find out the side effects seen of giving SF1126.
- To measure the levels of SF1126 in the blood.
- To determine if your tumor gets smaller after treatment with SF1126.
- To look at changes in the amount of protein products found in blood cells after treatment with SF1126.
- To look at whether certain gene changes in your tumor make it more or less likely that your tumor will respond to SF1126.
- To describe the amount of neuroblastoma tumor found in the blood and bone marrow by testing samples with a new test (called TLDA) that has been found to be more sensitive.

Criteria that need to be met to participate in this study:

- Patients must be at least 12 months old and $\leq$ 30 years of age.
- Patients must have high risk neuroblastoma and have a response to prior therapy that fits into at least one of the following categories:
    - Relapsed or progressive disease at any time before study enrollment.
    - Refractory disease: patients had “no response” and still have persistent sites of disease after receiving a minimum of 4 cycles of induction treatment and have never had a disease relapse or progression.
    - Persistent disease: patients had a “partial response” and still have persistent sites of disease after receiving a minimum of 4 cycles of induction treatment and have never had a disease relapse or progression.
        - Some patients will need a surgical biopsy done of the tumor to confirm it is neuroblastoma before they will be able to enroll on study. Please check with your doctor as they will be able to tell you if your child will need a biopsy to meet the requirements to enroll on this study.
- Patients must have adequate heart, kidney, liver, lung, pancreas and bone marrow function. Patients who have bone marrow disease must still have adequate bone marrow function to enter the study.
- Patients must have a calculated body surface area of $1m^2$ or less to enroll in the first dose level. After dose level 1 is completed, there will be no restriction on eligible body surface area.

- Patients with other ongoing serious medical issues must be approved by the study chair prior to registration.

Patients cannot participate in the study if:

- Females of childbearing potential must have a negative pregnancy test.
- Pregnancy, breast feeding, or unwillingness to use effective contraception during the study
- Patients with known type 1 or type 2 diabetes mellitus are not eligible.
- Patients status post allogeneic stem cell transplant are not eligible.
- Patients who, in the opinion of the investigator, may not be able to comply with the safety monitoring requirements of the study.
- Patients with disease of any major organ system that would compromise their ability to withstand therapy.
- Patients who are on hemodialysis are not eligible.
- Patients with an active or uncontrolled infection. Patients on prolonged antifungal therapy are still eligible if they are culture and biopsy negative in suspected radiographic lesions and meet other organ function criteria.
- Patients with known intraparenchymal brain metastases at study entry are not eligible. Patients with skull metastasis with intracranial extension are eligible.
- Known history of human immunodeficiency virus (HIV) infection, hepatitis B or hepatitis C are not eligible.
- Declines participation in NANT 2004-05, the NANT Biology Study.

Study procedures:

This study will test up to 3 SF1126 doses in groups of 3-6 patients, which will be assigned upon enrollment.

Each treatment course is 28 days.
This diagram outlines one course of therapy on this study:

Drug Administration

Week	Day 1	Day 4	
1	SF1126	SF1126	
2	SF1126	SF1126	
3	SF1126	SF1126	
4	SF1126	SF1126	Disease Evaluation after Day 1 of Week 4 of Cycles 2, 4, and 6.

Patients will have their neuroblastoma evaluated by bone marrow tests and scans after day 1 of week 4 of treatment of cycles 2, 4 and 6. Each cycle is 28 days.

Patients may receive up to 6 cycles of therapy (6 months) on study in the absence of progressive disease. Decisions regarding additional therapy on this study will be made by the study chair and treating physician in collaboration with the NANT Medical Director.

For more information, please contact nantops@chla.usc.edu.