

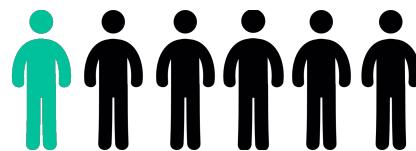
# SoNano

Making cancer treatment 10x more precise

## Problem

Every year, 1.8 million new Americans are diagnosed with cancer. Current treatments, like chemotherapy, one of the most popular, have only a 47% five year survival rate. Others like Radiation and Surgery are similarly detrimental because they have off-target effects, and are time-consuming and expensive.

1 in 6 deaths worldwide are caused by cancer



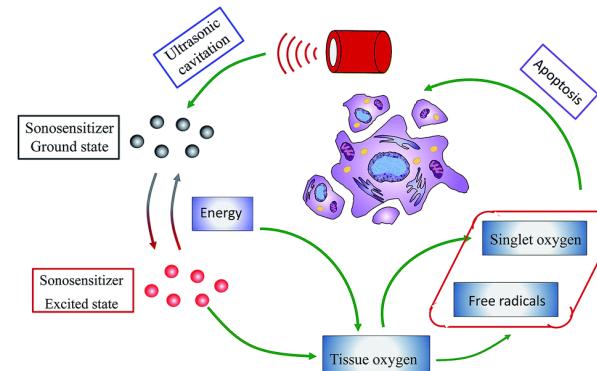
## Our Vision

With SoNano, we are making treatment for one of the leading causes of death easier than getting a flu shot by making cancer treatments 10x more targeted to cancer sites while minimizing any negative side-effects.

## Our Solution

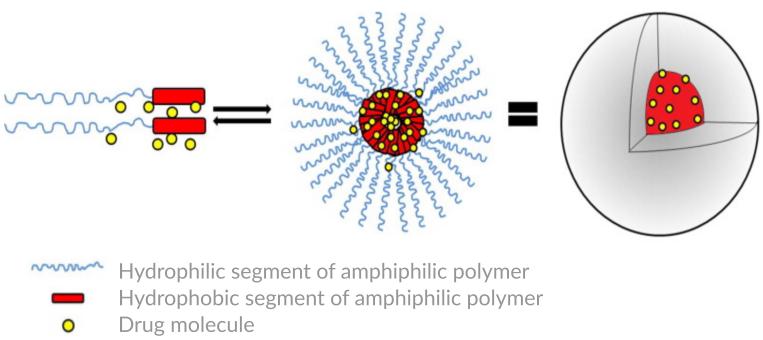
### Sonodynamic Therapy

Sonodynamic therapy is a new approach to cancer treatment. Tumors are targeted and destroyed through the use of ultrasounds and sonosensitizers, which are molecules that react with sound waves to make reactive oxygen species inducing cell death. They are currently used to cause the death of cancer cells. However, this technology is still in its early stages and hasn't been thoroughly experimented on.



### Polymeric Micelles

Polymeric micelles are the perfect nanoparticles for cancer drug delivery. For starters, their outer membranes can contain artificial components like sonosensitizers. They also form into spheres that help them isolate drugs and ensure that they don't release in unintended areas of the body.



## The Process



### Injection

Patients will be injected with polymeric micelles. Each nanoparticle will have a sonosensitizer on the outside as well chemotherapy drugs in the inside.



### Ultrasound

After 30 minutes, the patient will receive an ultrasound that is directed toward the tumor site. All the nanoparticles near the tumor will be activated by the ultrasound due to the sonosensitizers.



### Drug Delivery

The nanoparticles will then release the chemotherapy drugs, killing the tumor. Any nanoparticle that isn't activated, won't release the drugs, preventing the death of healthy cells in other parts of the body.