



### Diagnosis

### Emotional Impact

### Treatment/Side Effects

### Survivorship

### Patient Stories

#### Who is Moderna

Moderna is a biotech company based in Boston and started 20 years ago. Almost every American thinks of it as the company that developed a highly effective COVID vaccine in record time

At Fighting Chance, our patients often ask, “If Moderna could get a vaccine for COVID in less than a year, why doesn’t it try to do the same thing for cancer?”

What is not common knowledge is that Moderna has been working to develop an effective vaccine for cancer, using the same technology -- “mRNA” -- that has worked so well in the COVID vaccine.

#### What is mRNA?

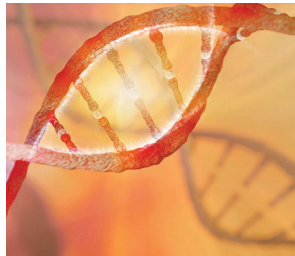
Most of us know that proteins are the building blocks of the human body and are manufactured inside our cells per a special blueprint known as RNA. Actually, it’s called “Messenger RNA” because it is transmitting protein-building instructions.

What Moderna accomplished was to create a synthetic version of mRNA, so that it conveyed a blueprint designed by scientists.

That blueprint produced proteins that would kill COVID on sight -- the role of a vaccine. But Moderna also devised another version of mRNA that creates proteins endowed with cancer-killing capabilities.

#### Remind me . . . How Does All this Relate to Cancer?

mRNA stands out as a completely new technique for killing cancer cells. And that is why progress with mRNA is important.



mRNA being synthesized

Today science has essentially four ways of killing cancer cells: chemotherapy, radiation, targeted therapy (such as Avastin®) and immunotherapy (such as Yervoy®).

None of these approaches are based on the audacious idea from Moderna -- to insert synthetic mRNA into cells and then watch as this produces specialized proteins that can be harnessed to T cells and make the immune system much more robust.

Plus as the COVID vaccine demonstrated, mRNA-based vaccines can be manufactured on a highly cost-effective basis and in enormous batches.

#### Latest Clinical Trial Results

Despite the success of mRNA as the backbone of its COVID vaccine,

Moderna has never seen signs of an mRNA vaccine that could block the progress of cancer.

That has recently changed since on December 14, 2022, Moderna announced the results of a Phase 2b trial in which one of its experimental vaccines successfully blocked the recurrence of skin cancer among most of a group of 150 melanoma patients whose malignancy had been removed.

Even when a tumor is surgically removed, there’s a significant risk the cancer may return -- two to five years later. But in the recent Moderna trial, the risk of recurrence was slashed by 44% and some say this will change the way melanoma cases are treated in the future.

According to Jeffrey S. Weber, MD, Deputy Director at Perlmutter Cancer Center, NYU Langone, “The results of Moderna’s trial provides the first evidence that we can improve the rates of recurrence in high risk melanoma.”

An auspicious start to what we hope will provide many successful cancer treatments in the near future.

Fighting Chance has offices in  
Sag Harbor and at the  
Phillips Family Cancer Center  
in Southampton.

For more details, or information  
please call **631 725 4646**  
Visit our website at  
[www.fightingchance.org](http://www.fightingchance.org)