



- [Home](#)
- [SF STAT!](#)
- [Current Articles](#)
- [CURRENT ISSUE](#)
- [Online Newspapers](#)
- [WEEKLY NEWSLETTERS](#)
- [Media Kit](#)
- [Calendar](#)
- [Business Directory](#)
- [Video Interviews](#)
- [Contact](#)

Select Page

## Dr. Antonio Iavarone Is Committed to Changing How We Treat Brain Tumors

Antonio Iavarone, M.D., has made a decades-long commitment to finding better treatments for glioblastoma and other aggressive brain tumors. As the new deputy director of Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine, he will have opportunities to do even more.



Antonio Iavarone, M.D.

“W  
e

are  
incredibly  
pleased  
that  
Dr.  
Iavarone  
has  
joined  
our  
leadership  
team  
at  
Sylv  
es

te  
r,  
"  
sa  
id  
St  
ep  
he  
n  
D.  
Ni  
me  
r,  
M.  
D.  
,  
di  
re  
ct  
or  
of  
Sy  
lv  
es  
te  
r,  
Os  
ca  
r  
de  
la  
Re  
nt  
a  
En  
do  
we

d  
Ch  
ai  
r  
in  
Ca  
nc  
er  
Re  
se  
ar  
ch  
,  
an  
d  
ex  
ec  
ut  
iv  
e  
de  
an  
fo  
r  
re  
se  
ar  
ch  
at  
th  
e  
Mi  
ll  
er  
Sc  
ho  
ol

.  
“H  
e  
ha  
s  
be  
en  
a  
le  
ad  
er  
in  
br  
ai  
n  
tu  
mo  
r  
re  
se  
ar  
ch  
fo  
r  
mo  
re  
th  
an  
20  
ye  
ar  
s  
an  
d  
wi  
ll  
br

in  
g  
ma  
ny  
no  
ve  
l  
in  
si  
gh  
ts  
to  
ou  
r  
ca  
nc  
er  
ce  
nt  
er  
.”

A pediatric oncologist by training, Dr. Iavarone spent the last 20 years at Columbia University, where he was professor of neurology and pathology and cell biology, and where he made several important breakthroughs, such as identifying a novel genetic abnormality, the FGFR3-TACC3 fusion gene, in patients with glioblastoma. As yet, his achievements have not translated into improved patient outcomes, but his work can change the way these tumors are treated.

“Glioblastoma patients have benefited very little from the work we have done in the lab, thus far,” said Dr. Iavarone. “They are still given the same therapies they received 20 years ago because numerous clinical trials have been unsuccessful.”

Dr. Iavarone is both passionate about the scientific insights

that come from research conducted by him and his colleagues and frustrated by the lack of meaningful clinical progress in the field. He believes that by harnessing Sylvester's clinical and research acumen, he can help change the clinical trajectory for many brain tumor patients.

"I came to Sylvester because I want to give patients better tools to fight their disease," he said. "While we may need to invent brand-new approaches, much can still be learned from work that is currently being conducted in research labs around the world. We must now translate those findings from the lab to the clinic."

### **The Dismal Consequences of Glioblastoma**

Saying glioblastomas are deadly would be selling them short. The five-year survival rate is only 6.8%, and the average patient lives only eight months after diagnosis. Unlike some cancers, historical treatments for malignant brain tumors have not significantly changed patients' outcomes.

"P 

atStephen D. Nimer, M.D.

ie  
nt  
s  
al  
mo  
st  
al  
wa  
ys  
re  
ce  
iv  
e  
th  
e

sa  
me  
tr  
ea  
tm  
en  
ts  
-  
ra  
di  
at  
io  
n  
an  
d  
a  
ch  
em  
ot  
he  
ra  
py  
dr  
ug  
ca  
ll  
ed  
te  
mo  
zo  
lo  
mi  
de  
,”  
sa  
id  
Dr



.  
Ia  
va  
ro  
ne  
. "0  
bv  
io  
us  
ly  
,  
gi  
ve  
n  
th  
e  
pr  
og  
no  
si  
s  
th  
at  
pa  
ti  
en  
ts  
fa  
ce  
,  
we  
mu  
st  
do  
be  
tt

er  
.”

One problem is that glioblastoma tumors are highly diverse. The mutations in one patient’s tumor may differ substantially from those in another’s. In fact, mutations may be different in different regions of the same tumor.


This has made clinical trials extremely difficult. Because these tumors are so molecularly diverse, it is challenging to find a single drug that is more effective than temozolamide in large clinical trials. It’s like trying to use the parts from a single make and model to repair 50 different types of cars: They’re just not going to work.

“These trials have been unsuccessful because they rarely study the tumors in sufficient depth so they can tailor the treatments to the needs of that specific patient,” said Dr. Iavarone. “If half of the tumor responds to one drug and the other half responds to a different one, when you treat the patient with just one drug, not only will the trial fail, but you won’t even know why it failed.”

## **Harnessing Molecular Tools and 3D Models to Personalize Care**

Dr. Iavarone believes Sylvester researchers and clinicians can improve these outcomes. The first step is taking the molecular tools that have been so successful in the lab and bringing them into the clinical care of the patient.

The Sylvester team will be taking material from surgically removed tumors and analyzing it on multiple platforms to study DNA, RNA, proteins, metabolites, etc., and fully characterize each patient’s unique cancer in order to find its vulnerabilities.

  
Henri R. Ford, M.D., M.H.A.

“D  
r.

Ia  
va  
ro  
ne  
an  
d  
hi  
s  
te  
am  
ar  
e  
ta  
ck  
li  
ng  
th  
es  
e  
ch  
al  
le  
ng  
in  
g  
ca  
nc  
er  
s  
wi  
th  
mo  
le  
cu  
la  
r  
an

al  
ys  
es  
th  
at  
wi  
ll  
he  
lp  
cr  
ea  
te  
ta  
il  
or  
ed  
,  
pe  
rs  
on  
al  
iz  
ed  
tr  
ea  
tm  
en  
ts  
,”  
sa  
id  
He  
nr  
i  
R.  
Fo  
rd

,  
M.  
D.  
,  
M.  
H.  
A.  
,  
de  
an  
an  
d  
ch  
ie  
f  
ac  
ad  
em  
ic  
of  
fi  
ce  
r  
of  
th  
e  
Mi  
ll  
er  
Sc  
ho  
ol  
.  
"W  
e  
se  
e

gr  
ea  
t  
po  
te  
nt  
ia  
l  
to  
mo  
ve  
th  
e  
ne  
ed  
le  
an  
d  
im  
pr  
ov  
e  
pa  
ti  
en  
t  
ou  
tc  
om  
es  
.”

The molecular information that comes from these in-depth studies will help oncologists identify more effective therapies. In addition, biopsy material will be used to create 3D tumor models –called organoids – that closely mimic each patient’s cancer. The oncology team can then test different

therapies on the organoids to determine the best therapeutic option.

“While the patient is recovering from the surgery, we can identify specific, tailored therapies that have been pretested using the patient’s own tumor cells,” said Dr. Iavarone. “We want to create an infrastructure that can provide real-time answers to deliver the best possible treatments – not tomorrow or next year, but now.”

South Florida Hospital News and Healthcare Report’s number one goal is top quality healthcare journalism written and edited for the region’s most successful, powerful healthcare business executives and professionals.



Phone : [561-368-6950](tel:561-368-6950)

Fax : [561-368-6978](tel:561-368-6978)

- [Home](#)
- [About](#)
- [CURRENT ISSUE](#)
- [Media Kit](#)
- [Video News](#)
- [Datebook](#)
- [Calendar](#)
- [Business Directory](#)
- [Webinars](#)
- [Contact](#)

Copyright © 2021 Florida Hospital News and Healthcare Report.  
Site Designed By