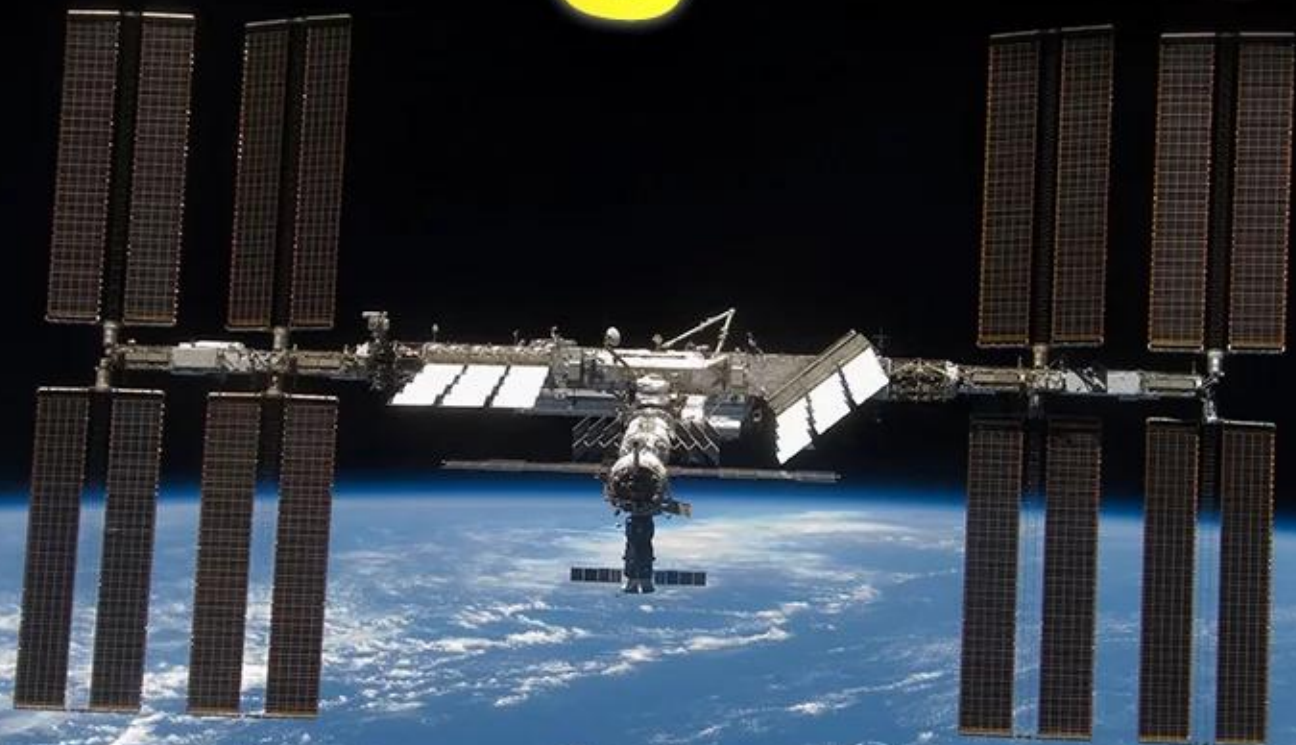


# Fighting Cancer



Through Microgravity Research

1  
00:00:01,750 --> 00:00:05,030

[Music]

2  
00:00:10,150 --> 00:00:08,549

we can grow 3d tissue in a in a fashion

3  
00:00:11,430 --> 00:00:10,160

that better resembles what happens in

4  
00:00:13,270 --> 00:00:11,440

the human body

5  
00:00:15,190 --> 00:00:13,280

cancer tumor grows in different ways in

6  
00:00:17,109 --> 00:00:15,200

the human body it's a 3d structure

7  
00:00:19,109 --> 00:00:17,119

sometimes almost spherical

8  
00:00:21,109 --> 00:00:19,119

and so that's what happens in vivo in

9  
00:00:23,670 --> 00:00:21,119

the human body when you try to do that

10  
00:00:25,750 --> 00:00:23,680

in vitro in a test tube or a petri dish

11  
00:00:27,189 --> 00:00:25,760

it looks more like layers

12  
00:00:28,550 --> 00:00:27,199

just looking at the shape you could

13  
00:00:29,669 --> 00:00:28,560

compare that to something that looks

14

00:00:32,790 --> 00:00:29,679

more like a tater tot in

15

00:00:34,790 --> 00:00:32,800

three-dimensionality versus a pancake so

16

00:00:36,709 --> 00:00:34,800

although it's the same material just the

17

00:00:38,869 --> 00:00:36,719

fact that it has a different shape

18

00:00:40,389 --> 00:00:38,879

changes a lot of things so if you don't

19

00:00:42,389 --> 00:00:40,399

have the right shape then you can really

20

00:00:44,389 --> 00:00:42,399

conduct the tests as accurately as you

21

00:00:46,069 --> 00:00:44,399

would like to

22

00:00:47,910 --> 00:00:46,079

we're integrating two experiments

23

00:00:50,150 --> 00:00:47,920

scheduled to be launched at an orbital

24

00:00:51,590 --> 00:00:50,160

atk 7. we're hopeful that these two

25

00:00:53,830 --> 00:00:51,600

experiments are going to help us in the

26  
00:00:55,350 --> 00:00:53,840  
fight against this devastating disease

27  
00:00:57,350 --> 00:00:55,360  
i've had the unique opportunity i've

28  
00:00:59,270 --> 00:00:57,360  
been very fortunate in this regard of

29  
00:01:02,310 --> 00:00:59,280  
seeing different experiments go to

30  
00:01:04,229 --> 00:01:02,320  
station and from osteoporosis research

31  
00:01:05,830 --> 00:01:04,239  
to cardiac research

32  
00:01:07,750 --> 00:01:05,840  
to cancer

33  
00:01:09,270 --> 00:01:07,760  
to drug resistance

34  
00:01:11,910 --> 00:01:09,280  
all of those

35  
00:01:14,469 --> 00:01:11,920  
only had a part of the vision being

36  
00:01:16,149 --> 00:01:14,479  
helping humans go to go to mars and go

37  
00:01:18,310 --> 00:01:16,159  
beyond the microgravity environment but

38  
00:01:20,469 --> 00:01:18,320

mostly are to bring benefits to people

39

00:01:22,630 --> 00:01:20,479

on earth and that's really what

40

00:01:24,550 --> 00:01:22,640

motivates me to keep going knowing that

41

00:01:28,149 --> 00:01:24,560

might bring a little bit of help to to