

# VR will help cancer research and treatments

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## 1.Introduction

In these days, the researches that combine medicine with techniques such as AI, big data and VR(Virtual Reality) comes to be closely realized in the medical research. Because I am interested in the researches, I want to go to CRUK(Cancer Research UK) and hear about the researches.

## 2.Fundamental

In the research that is focused this time, cancer is seen three-dimensionally by taking a tumor in VR as 3D model.

3D model of a tumor(on the left)

Method to take a tumor in VR as 3D model  
(on the right)



## 3.Method

I met with Dr Dario Bressan (Head, IMAXT Laboratory) and asked some research questions on the right.

### My hypothesis

If it is possible to see a tumor of each patient and find a characteristic of it, patients will receive the best medical treatments that match each of them.

### My research questions

- ①By building 3D model of a tumor in VR, how do you think about applying it to the treatment of the patient at a hospital?
- ②How do you think about making 3D model of the individual patient cancer?
- ③Is it possible to know the border of a wettability cancer and a normal cell by Building 3D model of a tumor in VR easily?



## 4.Result

### Answer to my research question

- ①If it is possible to build 3D model of tumor at clinical site, it's possible to find the best treatments to match each patient. VR is also useful to tell patients why they receive treatments.
- ② It takes a few months to build one 3D model. And it costs a lot.If it's possible to build 3D model of individual tumor, it is helpful of surgery.
- ③It is possible to see tumors that are already developed. However, it is difficult to see the growth of cancer cells with VR.

### Consideration

By solving the problems of time and costs, it will be possible to treat patients of cancer in the best way that matches each of them. And more patients of cancer lives will be saved.I think that there is a tendency that VR is attracted attention to use at clinical site. However, VR is useful in the field of fundamental researches. It will be the way to discover the structure of the human body or an ill characteristic.

## 5.Conclusion

The studies that combine computer science and medicine is advanced and will give good results. As they find many new discoveries, the number of them will increase.

### Future Research

I think that it will be possible to take a tumor in VR earlier and cheaper if it is possible to build 3D model from a part of tumor or pictures of tumor.

## 6.Acknowledgements

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## 7.References

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