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## RADIOIODINE FOR BREAST CANCER THERAPY : A PILOT PROJECT IN SKBR-3 CELL LINE

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### CONFLICT OF INTEREST


• No conflict of interest.

### BACKGROUND


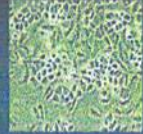
- Breast cancer is the most cancer in women. According to the World Health Organization, around 8-9% of women have breast cancer risk.
- The HER2+ type has limited response to the therapy. It has a worse prognosis than the luminal group.
- Radioiodine has been used for more than 60 years and has become an integrated part of its management.
- Radioiodine taken up by thyroid cells through an active transport mechanism involving a Sodium/Iodide Symporters (NIS) as co-transporter.
- SKBR3 cell is a HER2 type breast cancer of cell line. It expresses NIS.
- The purpose of this study is to analyzed the uptake and toxic effect of radioiodine in SKBR3 cell line.

### MATERIAL AND METHOD

- This experimental study
- SKBR-3 cell line from ATCC (American Type Culture Collection)
- Radioiodine: Radioiodine <sup>125</sup>I was used measure the uptake and <sup>131</sup>I was used to measure the toxicity.
- The study was conducted at :
  - The cell culture Laboratory of Radiolotope and Radiopharmaceutical Technology (PDR) of National Nuclear Body of Indonesia



### RESULT : RADIOIODINE UPTAKE

The mean radioiodine uptake was 85% for SKBR3 cell line with a p-value of 0.002.

RESULT:  
CLONOGENIC TEST (TOXIC EFFECT OF RADIOIODINE)

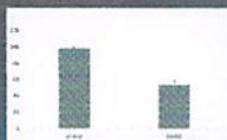


Figure 1. Clonogenic test result of SKBR3 cells. The toxic effect of radioiodine on SKBR3 cells is shown.

CONCLUSION

- Radioiodine is taken by SKBR3 cells and it demonstrate the toxicity to the cell.
- Our finding shows an opportunity for radioiodine as an alternative for breast cancer therapy.
- Especially for cases which un-response to existing therapy.
- Further study is need to understand the mechanism.

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Tarimo  
Kasih



Thank You

