

## **HOW TO GIVE ECONOMIC TARGETED THERAPY; ONE DOSE ,FOR FIVE PATIENTS....**

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**RATIONAL** Grapefruit can block the activity of certain enzymes in the intestine that is involved in the metabolism of certain medications. Because the medications can't be broken down, blood levels may rise and become toxic.

alternatively we can lower dose of chemotherapeutic medications and or targeted therapy ,and hopefully achieving the same results as the full dose,

one full dose of targeted therapy namely trastuzumab was sufficient for five patients ,as grape fruit increase toxicity of the drug 5 times

### **METHOD**

This trial was conducted in Egypt air hospital in the period between 2013 and 2016,15 patients were enrolled in trial receiving fifth of the dose of trastuzumab ,and 15 others receiving full dose as a control ,enrolled patients was instructed to drink 250 cc of grape fruit before chemotherapy by one hour an each day after for one week at the same time all patients were metastatic breast cancer cases.

### **RESULTS**

First group that receive truncated dose ,had less toxicity ,better tolerability, no delay in treatment time ,and better quality of life ,Further more progression was only in one patients of this group in comparison with 5 patients progressed in the full dose group.

### **CONCLUSION AND RECOMMENDATIONS**

Grapefruit toxicity with various chemotherapeutics could be used as an economic tool in countries with a low budget for health care ,giving fractions of the dose of trastuzumab with grapefruit was at least non inferior the giving the full dose, nevertheless it was even better.

Studies with a bigger number of patients ad on different chemotherapeutic medications are highly encouraged.