Ki-67 is an independent prognostic factors of pCR in patients undergoing neoadjuvant chemotherapy. The importance of Ki-67.

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Background
- Neoadjuvant chemotherapy (NAC) is widely used to downstage breast cancers prior to surgery.
- Pathologic complete response (pCR) rate is a strong predictor of outcome for breast cancer.
- Ki-67 is used as a marker of tumour aggressiveness.

Methods
- We analyzed data retrospectively/prospectively on 152 TNBC patients undergoing NAC.
- The primary hypothesis was that higher expression of Ki-67 protein (pKi-67) is associated with the proliferative activity of intrinsic cell populations in malignant tumours.
- Ki-67 is present during all active phases of the cell cycle (G1, S, G2 and M) but is absent in resting cells (G0).

Results
- The primary hypothesis was that higher levels of Ki-67 would be associated with a better overall prognosis, independent of anti-cancer therapy.
- Receiver-operating characteristic (ROC) curve analysis was used to determine the optimal cutpoint for Ki-67.
- DFS was calculated from the time of diagnosis to first date of any documented disease recurrence, death, or date of last-tick-up.
- FISH was used to confirm HER-2 positivity.
- Multivariate models included only variables that exhibited a univariate association with the dependent variable.
- Univariate models were used for the analysis of categorical variables.

Conclusions
- Ki-67 is an independent prognostic factors of pCR in patients with early TNBC undergoing neoadjuvant chemotherapy.

Univariate Analysis

Logistic Regression Analysis

Figure 7. pCR by Ki-67 at different cut-off levels.  
Figure 8. ROC Curve of Ki-67 for Prediction of pCR.  
Figure 3. Response to neoadjuvant chemotherapy.  
Figure 4. Prevalence of Ki-67 in TNBC (tumours p-chemotherapy).

Figure 5. pCR by stage.  
Figure 6. ROC Curve of Ki-67 for Prediction of pCR.  
Figure 8a. Ki-67 cut-off 30%.  
Figure 8b. Ki-67 cut-off 40%.  
Figure 8c. Ki-67 cut-off 50%.  
Figure 8d. Ki-67 cut-off 60%.

Table 1. Univariate Analysis - Variables not significant.

Table 2. Logistic regression analysis.