

# Clinical Impact: How Our Model Guides Treatment Decisions

## CURRENT APPROACH

All 227 patients receive chemotherapy  
159 respond (70%) | 68 don't respond (30%)  
Result: 68 patients suffer side effects without benefit



## WITH OUR ML MODEL



True Positive (correctly treated)



False Positive (unnecessarily treated)



True Negative (correctly avoided)



False Negative (missed treatment)

### Model Says: TREAT

165 patients  
135 will respond (TP)  
30 won't respond (FP)

### Model Says: DON'T TREAT

62 patients  
38 correctly avoided (TN)  
24 will miss benefit (FN)

**Model Performance: Sensitivity = 84.9% | Specificity = 55.9% | AUC = 0.705**

**IMPACT: 38 patients (56% of non-responders) avoid unnecessary chemotherapy while maintaining 85% treatment rate for responders**