Complete remission (CR) after induction therapy is the first treatment goal in acute myeloid leukemia (AML) patients. The aim of this study is to determine the ability of the bivalent ex vivo drug sensitivity platform Exvitech to predict the CR rates after induction chemotherapy with cytarabine (ARA-C) and idarubicin (IDA) in 1st line AML.

RESULTS

Eight different concentrations of each drug or drug combination is run for the used samples (listed alphabetically) to determine individual dose-response curves. The survival index (y-axis) ranges from 100% to 0 displaying the selective AML response to each of the drugs. For CYT 40% patient samples have resistant cells left alive at 48 h. IDA eliminates all cells within this timeframe.

Individual Dose Response Curves

B. B. The EC50 (y-axis) of the whole sample and its 60% confidence interval. The assay results for CYT and IDA for each sample (samples run in duplicate).

C. EC50 of the same samples to idarubicin.

Figure 1

90% Prediction ex vivo Personalized Medicine Test

Key clinical indicators overall prediction 90% & NPV 94%

• Sensitivity: 87%, specificity: 91%
• ROC Curve

Figure 4

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