

S28-1 **Molecular imaging application for new drug development**

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When appropriate imaging technique is applied at exploratory stage and POC stage over the pre-clinical study, candidates of new drugs could be efficiently selected and it improves the success rate of development of new drugs. For example, based on the published data by a mega-pharmaceutical company, the number of projects the company has ceased over the past several years due to their liver-toxicity amounts to 16, and it is assumed that the company could have saved approximately 60 billion yen if the liver-toxicity were detected at an earlier stage of new drug development. Moreover, the development period for an anti-cancer drug had been cut down by 6 months by using PET earlier in the clinical study. Thus, it has become widely known that using imaging techniques from the pre-clinical stage onto the clinical stage contribute to the efficiency in development of new drugs. At our university, we have conducted pre-clinical study by using imaging technology for developing new drugs and these results have suggested that pre-clinical imaging is useful for evaluation of the new drugs.