Selinexor (KPT-330) and melphalan combination therapy for the treatment of multiple myeloma

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Conclusions

• XPO1 inhibitors synergistically improved the response of myeloma cells to melphalan both in vitro and ex vivo.

• Synergy may be due to an increase of nuclear p53 by XPO1 inhibitors and the reported activation of p53 by melphalan.

• Future studies include in vivo experiments using human myeloma cells in NOD-SCID-gamma mice and clinical trials using melphalan in combination with the XPO1 inhibitor selinexor.

• Combination therapies using selinexor and melphalan may significantly improve the treatment of myeloma.