

Supplementary Information Titles

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| Journal: Nature Medicine |
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| Article Title: | Tumor cell-specific bioluminescence platform to identify stroma-induced changes to anti-cancer drug activity |
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| Supplementary Item & Number (add rows as necessary) | Title or Caption |
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| Supplementary Figure 1 | Features of CS-BLI for the specific measurement of tumor viability in the presence or absence of accessory cells. |
| Supplementary Figure 2 | CS-BLI confirms that co-culture with BMSCs confers protection against specific anti-tumor agents in MM cells. |
| Supplementary Figure 3 | BMSCs confer protection against various agents in leukemia cell lines. |
| Supplementary Figure 4 | Co-culture with BMSCs can protect solid tumor cell lines against anti-cancer agents. |
| Supplementary Figure 5 | Co-culture with primary BMSCs from MM patients provides tumor cell protection against specific anti-cancer agents. |
| Supplementary Figure 6 | Interaction of MM cells with BMSCs leads to distinct changes in transcriptional signatures indicative of the activation of key molecular pathways in tumor cell pathophysiology. |
| Supplementary Figure 7 | In vitro luciferase and kinase activity assays of reversine. |
| Supplementary Figure 8 | Imaging results over time for each reversine-treated and control mouse in the tumor experiment of MM.1S-GFP/luc cells injected i.v. vs. s.c. |
| Supplementary Table 1 | Examples of transcripts significantly modulated in tumor cells by their interaction with stroma. |
| Supplementary Table 2 | Probes of a stroma - induced transcriptional signature associated with adverse clinical outcome in Dex-treated myeloma patients. |