Supplementary figure 1

A  5µM Sorafenib (48 hrs)

B  Melphalan dose response curves

C  Melphalan +/- Sorafenib dose response curves
Supplementary figure 2

A  Response to 10µM Sorafenib at 48hrs and 12 days

![Graph showing relative cell survival for different cell lines treated with Sorafenib at different times.]

- 48 hrs (treatment at 2 hrs pre-melphalan)
- 12 days (treatment at day 6 post-temozolomide)
- 12 days (treatment at 2 hrs pre-temozolomide and day 6 post-temozolomide)

B  Response to 10 µM sorafenib measured at 48 hrs

- BRaf mutant
- NRas mutant
- WT / WT

C  Fold increase response to chemotherapy

- BRaf mutant TMZ
- WT TMZ
- NRas mutant L-PAM
- WT L-PAM
- NRas mutant L-PAM

* p = 0.30
* p < 0.02
Supplementary figure 3

A

B
Supplementary figure 4

A

![Graph showing Melphalan resistance (R_mel(\text{pH})) for different conditions.]

B

<table>
<thead>
<tr>
<th></th>
<th>DM443 4hrs</th>
<th>DM443 24hrs</th>
<th>DM366 4hrs</th>
<th>DM366 24hrs</th>
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<td>ERK1/2, 42/44kD</td>
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<tr>
<td>pERK1/2, 42/44kD</td>
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<td>Bim, FL, 23kD</td>
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<td>Actin, 42kD</td>
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<td>Mcl-1, 40kD</td>
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<td>BRaf, 86kD</td>
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![Immunoblot images for DM443 and DM366, comparing ERK1/2, pERK1/2, Bim, Actin, Mcl-1, and BRaf proteins at 4 and 24 hours.]

![Immunoblot images for DM646, similar to DM443 and DM366 but showing different protein levels.]

Supplementary figure 5

A

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</tbody>
</table>

B

Melphalan resistance ($R_{\text{melph}}$)

- Melphalan
- Melphalan (siControl)
- Melphalan + Sorafenib
- Melphalan + Sorafenib (siControl)
- Melphalan (siMcl1)
- Melphalan + Sorafenib (siMcl1)

- BRaf V600E Mutant
- WT / WT
- NRas Mutant