

## Supplemental Tables

Table S1. Treatments assigned for patients enrolled on Mel44 trial in 4 study arms

| Mel 44 Study Arm  | Peptides to stimulate CD8 T cells | Peptides to stimulate CD4 T cells | Cyclophosphamide pre-treatment |
|---|-----------------------------------|-----------------------------------|--------------------------------|
| A   | 12MP                              | Tet                               | No                             |
| B   | 12MP                              | Tet                               | Yes                            |
| C   | 12MP                              | 6MHP                              | No                             |
| D   | 12MP                              | 6MHP                              | Yes                            |
| <p>12MP = 12 class 1 major histocompatibility complex-restricted melanoma peptides stimulating CD8<sup>+</sup> T cells;</p> <p>Tet = nonspecific tetanus helper peptide;</p> <p>6MHP = six melanoma-associated class 2 major histocompatibility complex-restricted melanoma helper peptides stimulating CD4<sup>+</sup> T cells</p> |                                   |                                   |                                |

Table S2. TRAE counts in Mel44 clinical vaccine trial, organized by grade, vaccine arm and biological sex

|                |                                     | <b>Total*</b> | <b>Male</b>      | <b>Female</b>   | <b>p-value</b> |
|----------------|-------------------------------------|---------------|------------------|-----------------|----------------|
| <b>Overall</b> | <i>Patient Numbers (% of total)</i> | <i>170</i>    | <i>114 (67%)</i> | <i>56 (33%)</i> |                |
|                | N without TRAEs                     | 1 (1%)        | 0 (0%)           | 1 (2%)          | 0.421          |
|                | N with grade 1 TRAEs                | 26 (15%)      | 20 (18%)         | 6 (11%)         |                |
|                | N with grade 2 TRAEs                | 124 (73%)     | 82 (72%)         | 42 (75%)        |                |
|                | N with grade 3 TRAEs                | 18 (11%)      | 11 (10%)         | 7 (12%)         |                |
|                | N with grade 4 TRAEs                | 1 (1%)        | 1 (1%)           | 0 (0%)          |                |
| <b>Arm A</b>   | <i>Patient Numbers (% of total)</i> | <i>41</i>     | <i>28 (68%)</i>  | <i>13 (32%)</i> |                |
|                | N with grade 1 TRAEs or no TRAEs    | 5 (12%)       | 5 (18%)          | 0 (0%)          | 0.309          |
|                | N with grade 2 TRAEs                | 30 (73%)      | 19 (68%)         | 11 (85%)        |                |
|                | N with grade 3 or 4 TRAEs           | 6 (15%)       | 4 (14%)          | 2 (15%)         |                |
| <b>Arm B</b>   | <i>Patient Numbers (% of total)</i> | <i>43</i>     | <i>26 (60%)</i>  | <i>17 (40%)</i> |                |
|                | N with grade 1 TRAEs or no TRAEs    | 2 (5%)        | 1 (4%)           | 1 (6%)          | 0.730          |
|                | N with grade 2 TRAEs                | 33 (77%)      | 19 (73%)         | 14 (82%)        |                |
|                | N with grade 3 or 4 TRAEs           | 8 (19%)       | 6 (23%)          | 2 (12%)         |                |
| <b>Arm C</b>   | <i>Patient Numbers (% of total)</i> | <i>42</i>     | <i>29 (69%)</i>  | <i>13 (31%)</i> |                |
|                | N with grade 1 TRAEs or no TRAEs    | 12 (29%)      | 6 (21%)          | 6 (46%)         | 0.177          |
|                | N with grade 2 TRAEs                | 28 (67%)      | 22 (76%)         | 6 (46%)         |                |
|                | N with grade 3 or 4 TRAEs           | 2 (5%)        | 1 (3%)           | 1 (8%)          |                |
| <b>Arm D</b>   | <i>Patient Numbers (% of total)</i> | <i>44</i>     | <i>31 (70%)</i>  | <i>13 (30%)</i> |                |
|                | N with grade 1 TRAEs or no TRAEs    | 8 (18%)       | 8 (26%)          | 0 (0%)          | 0.052          |
|                | N with grade 2 TRAEs                | 33 (75%)      | 22 (71%)         | 11 (85%)        |                |
|                | N with grade 3 or 4 TRAEs           | 3 (7%)        | 1 (3%)           | 2 (15%)         |                |

\*Total TRAEs were previously reported, but the breakdown by gender was not reported.