

Figure S1. Relationship among IgG, CTL, and OS in the PPV arm by the linear regression model. (A) IgG change and OS. (B) CTL change and OS. CTL, cytotoxic T lymphocyte; PPV, personalized peptide vaccination; OS, overall survival; IgG, immunoglobulin G

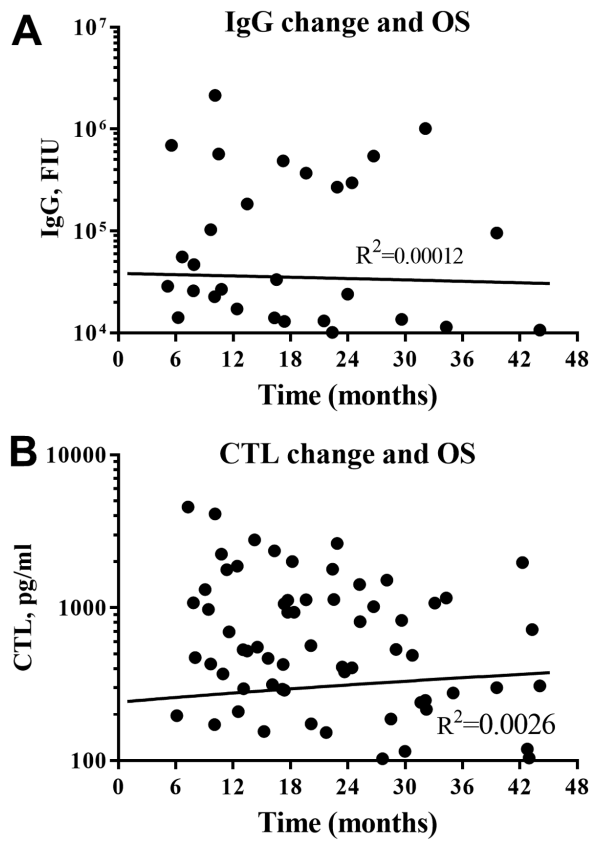


Figure S2. The most relevant % neutrophil or % lymphocyte cut-off. Relationship among % neutrophils (A), % lymphocytes (B), interaction P, and number of patients.

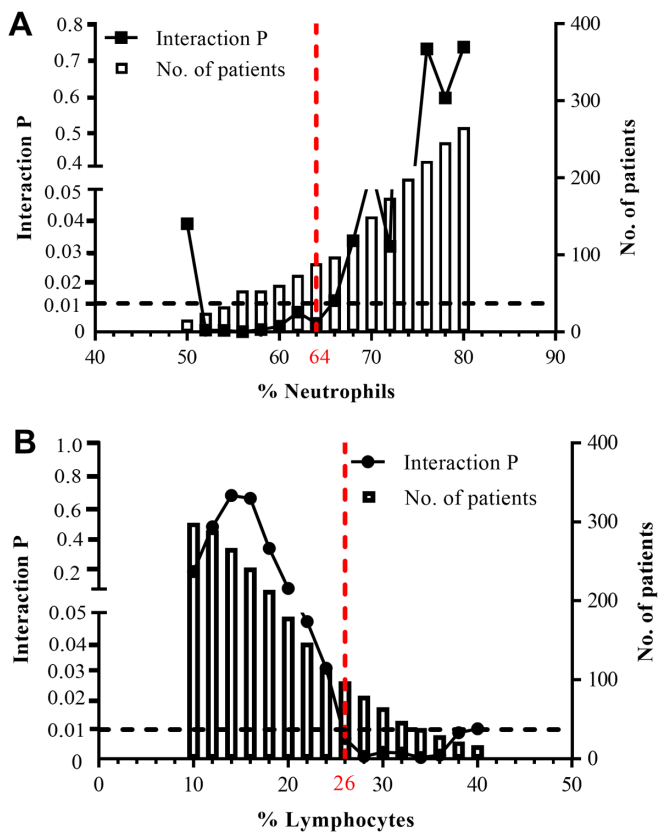


Table SI. Peptide candidates for personalized peptide vaccination.

| Peptide name | HLA type                          | Original protein | Position of peptide | Amino acid sequence |
|--------------|-----------------------------------|------------------|---------------------|---------------------|
| SART2-93     | A24                               | SART2            | 93-101              | DYSARWNEI           |
| SART3-109    | A24, A3 family <sup>a</sup> , A26 | SART3            | 109-118             | VYDYNCHVDL          |
| PAP-213      | A24                               | PAP              | 213-221             | LYCESVHNF           |
| PSA-248      | A24                               | PSA              | 248-257             | HYRKWIKDTI          |
| EGFR-800     | A24                               | EGF-R            | 800-809             | DYVREHKDNI          |
| MRP3-503     | A24                               | MRP3             | 503-511             | LYAWEPSFL           |
| MRP3-1293    | A24                               | MRP3             | 1293-1302           | NYSVRYRPGL          |
| SART2-161    | A24                               | SART2            | 161-169             | AYDFLYNYL           |
| Lck-486      | A24                               | p56 lck          | 486-494             | TFDYLRSLV           |
| Lck-488      | A24                               | p56 lck          | 488-497             | DYLRSLVLEDF         |
| PSMA-624     | A24                               | PSMA             | 624-632             | TYSVSFDSL           |
| PTHrP-102    | A24                               | PTHrP            | 102-111             | RYLTQETNKV          |

<sup>a</sup>A3 family; HLA-A3, -A11, -A31 or -A33. The safety and immunological effects of these 12 peptides were confirmed in previous clinical trials, and all peptides were prepared under conditions of Good Manufacturing Practice using a Multiple Peptide System. EGFR, epidermal growth factor-receptor; HLA, human leukocyte antigen; Lck, p56lck; MRP, multidrug resistance-associated protein; PAP, prostatic acid phosphatase; PSA, prostate-specific antigen; PSMA, prostate-specific membrane antigen; PTHrP, parathyroid hormone-related peptide; SART, squamous cell carcinoma antigens.