CLAIMS

1. Use of a population of allogeneic cells comprising Wilms Tumor 1 (WT1)-specific allogeneic T cells in the manufacture of a medicament for the treatment of WT1-positive multiple myeloma in a human patient in need thereof, wherein the human patient has been administered an allogeneic hematopoietic stem cell transplantation (HSCT) for multiple myeloma prior to the treatment, wherein the population of allogeneic cells is derived from a third-party donor that is different from the donor of the allogeneic HSCT, and wherein the population of allogeneic cells is restricted by an HLA allele shared with the human patient.
2. Use of a population of allogeneic cells comprising WT1-specific allogeneic T cells in the manufacture of a medicament for the treatment of WT1-positive plasma cell leukemia in a human patient in need thereof, wherein the human patient has been administered an allogeneic HSCT for plasma cell leukemia prior to the treatment, wherein the population of allogeneic cells is derived from a third-party donor that is different from the donor of the allogeneic HSCT, and wherein the population of allogeneic cells is restricted by an HLA allele shared with the human patient.
3. The use of claim 2, wherein the plasma cell leukemia is primary plasma cell leukemia.
4. The use of claim 2, wherein the plasma cell leukemia is secondary plasma cell leukemia.
5. The use of any one of claims 1-4, wherein a first dose of the medicament is to be administered to the human patient on the day of, or up to 12 weeks after, the allogeneic HSCT.
6. The use of any one of claims 1-5, wherein the human patient has failed the allogeneic HSCT.
7. The use of claim 6, wherein the multiple myeloma or plasma cell leukemia is refractory to the allogeneic HSCT or relapses after the allogeneic HSCT.
8. The use of any one of claims 1-4, wherein a first dose of the medicament is to be administered to the human patient within 12 weeks after the diagnosis of the multiple myeloma or plasma cell leukemia.
9. The use of any one of claims 1-8, wherein the medicament is to be administered to the human patient by infusion.

10. The use of any one of claims 1-9, wherein the medicament comprises at least about 1 x 10^5 cells of the population of allogeneic cells per kilogram per dose.
11. The use of claim 10, wherein at least 2 doses of the medicament are to be administered to the human patient.
12. The use of claim 11, wherein the administration of the medicament comprises a washout period between two consecutive doses, wherein no dose of the medicament is to be administered during the washout period, and wherein the washout period is about 1, 2, 3, or 4 weeks.
13. The use of any one of claims 1-12, wherein 3 doses of the medicament are to be administered to the human patient, each dose being in the range of 1 x 10^6 to 5 x 10^6 cells of the population of allogeneic cells per kilogram, and wherein said 3 doses are to be administered about 4 weeks, 3 weeks, 2 weeks, or 1 week apart from one another.
14. The use of any one of claims 1-13, wherein the medicament is to be administered to the human patient prior to the administration to the human patient of a second population of allogeneic cells comprising WT1-specific allogeneic T cells, wherein the population of allogeneic cells is restricted by an HLA allele shared with the human patient, and wherein the second population of allogeneic cells is restricted by a different HLA allele shared with the human patient.