WHAT IS CLAIMED IS:

1. Use of a lysine specific demethylase (LSD) inhibitor in the manufacture of a medicament for treating or preventing recurrence of a cancer comprising a cancer stem cell (CSC), wherein the CSC has impaired or abrogated expression of the pluripotent stem cell marker Sox2 in which the CSC expresses Sox2 at a level or functional activity that is less than about 1/5 of the level or functional activity of Sox2 on a pluripotent stem cell.

2. A use according to claim 1, wherein the cancer is a metastatic cancer.

3. A use according to claim 1 or claim 2, wherein the CSC has impaired or abrogated expression of the pluripotent stem cell marker Oct4 in which the CSC expresses Oct4 at a level or functional activity that is less than about 1/5 of the level or functional activity of Oct4 on a pluripotent stem cell.

4. A use according to claim 1 or claim 2, wherein the CSC expresses one or more CSC markers selected from ABCB5, ALDH1, ABCG2, α_6 integrin, α_2 β_1 integrin, β-catenin activity, CD15, CD13, CD20, CD24, CD26, CD29, CD44, CD90, CD133, CD166, CD271, c-Met, Nestin, CXCR4, LGR5 and Trop2.

5. A use according to any one of claims 1 to 3, wherein the CSC expresses one or more CSC markers selected from ALDH1, CD24, CD44, CD90, CD133, and α_6 integrin.

6. A use according to any one of claims 1 to 5, wherein the CSC is $CD44^{high}$, $CD24^{low}$.

7. A use according to any one of claims 1 to 6, wherein the CSC is selected from the group consisting of breast, prostrate, endometrial, ovarian, brain, lung, mesothelioma, melanoma, multiple myeloma, colon, kidney, head and neck, ovarian, pancreatic, leukemia, and lymphoma CSCs.

8. A use according to any one of claims 1 to 6, wherein the CSC is selected from the group consisting of breast, prostate, lung, bladder, pancreatic, colon, melanoma, liver or glioma CSC.

9. A use according to any one of claims 1 to 6, wherein the CSC is a breast CSC.

10. A use according to any one of claims 1 to 6, wherein the CSC is a prostate CSC.

11. A use according to any one of claims 1 to 10, wherein the CSC is a hormone receptor negative CSC.

12. A use according to any one of claims 1 to 10, wherein the CSC is a hormone receptor negative breast CSC.

13. A use according to any one of claims 1 to 12, wherein the LSD inhibitor is a LSD1 inhibitor.

14. A use according to any one of claims 1 to 12, wherein the LSD inhibitor is a LSD-2 inhibitor.

15. A use according to any one of claims 1 to 12, wherein the LSD inhibitor is a selective LSD-1 inhibitor.

16. A use according to any one of claims 1 to 12, wherein the LSD inhibitor is a Pan-LSD inhibitor.

17. A for use according to any one of claims 1 to 16, wherein the CSC gives rise to a non-CSC tumor cell.

18. A use according to any one of claims 1 to 16, wherein the CSC gives rise to a non-CSC tumor cell that is hormone-resistant.

19. A use according to claim 18, wherein the non-CSC tumor cell has reduced or abrogated expression of at least one hormone receptor selected from an estrogen receptor (ER) and a progesterone receptor (PR).

20. A use according to any one of claims 1 to 19, wherein the LSD inhibitor is a peptide or polypeptide LSD inhibitor.

21. A use according to any one of claims 1 to 20, wherein the LSD inhibitor is a small molecule LSD inhibitor.

22. Use of a lysine specific demethylase (LSD) inhibitor and a cancer therapy or agent in the manufacture of a medicament for treating or preventing recurrence of a cancer, wherein the cancer comprises cancer stem cells (CSCs) and non-CSC tumor cells, wherein the LSD inhibitor inhibits proliferation, survival or viability of the CSCs, wherein the cancer therapy or agent inhibits the proliferation, survival or viability of the non-CSC tumor cell, and wherein the CSCs have impaired or abrogated expression of the pluripotent stem cell marker Sox2 in which the CSC expresses Sox2 at a level or functional activity that is less than about 1/5 of the level or functional activity of Sox2 on a pluripotent stem cell.

23. A use according to claim 22, wherein the cancer is a metastatic cancer.

24. A use according to claim 22 or claim 23, wherein the CSC has impaired or abrogated expression of the pluripotent stem cell marker Oct4 in which the CSC expresses Oct4 at a level or functional activity that is less than about 1/5 of the level or functional activity of Oct4 on a pluripotent stem cell.

25. A use according to any one of claims 22 to 24, wherein the cancer therapy or agent is selected from radiotherapy, surgery, chemotherapy, hormone ablation therapy, pro-apoptosis therapy and immunotherapy.

26. A use according to any one of claims 22 to 25, wherein the cancer therapy or agent targets rapidly dividing cells or disrupts the cell cycle or cell division.

27. A use according to any one of claims 22 to 26, wherein the cancer is breast cancer.