WHAT IS CLAIMED IS:

1. A carcinoma-targeting conjugate comprising Formula I:

T-L-X

wherein T is a radiolabeled SST2R targeting ligand;
L is a linker, and
X is a chelator,
for the therapeutic treatment and medical imaging of cancer.

2. The conjugate of claim 1, wherein the SST2R targeting ligand is a peptide.

3. The conjugate of claim 1, wherein the SST2R ligand is an antibody or antibody fragment, or a small molecule.

4. The conjugate of claim 2 or 3, wherein the SST2R ligand is radiolabeled with a radionuclide that is used for medical imaging and/or therapy of the cancerous tumors.

5. The conjugate of claim 4, wherein the radionuclide is selected from the group consisting of Ga-68; In- 111; Pb-203; F-18; C-11; Zr-89; Sc-44; Tc-99m; Cu-64 and other medical radionuclide used for imaging.

6. The conjugate of claim 4, wherein the radionuclide is selected from the group consisting of Y-90; Pb-212; Bi-212; Bi-213; At-21 1; Lu-177; Re-188; Cu-67 (or other Cu radionuclide) and other medical radionuclide used to treat the cancerous tumors.

7. The conjugate of claim 1 whereby T is Tyr^3-octreotide.

8. The conjugate of any one of claims 1-7, wherein L is a chemical linker.

9. The conjugate of any one of claims 1-7, wherein L is a polyether linker comprising up to 4 carbons consisting of an aliphatic carbon chain that connects the chelator to the peptide backbone.

10. The conjugate of any one of claims 1-9 wherein L is PEG_n, wherein n is 1-4.

11. The conjugate of claim 10 whereby n is 2 or 4.

12. The conjugate of any one of claims 1-11, wherein X is a chelating agent based on 1,4,7,10-tetraazacyclododecane-7-acetamide-1,4,10-triacetic acid.

13. The conjugate of any one of claims 1-12 that is PSC-PEG_2/PEG_4-TOC.

14. A method of treating cancer comprising: administering the conjugate of claim 1.

15. The method of claim 14 whereby the conjugate is administered by a method selected from the group consisting of orally, parenterally, and subcutaneously.

16. The method of claim 14 whereby the conjugate is administered with an anti-cancer composition.

17. The method of claim 14 whereby the conjugate is administered in a single dose.

18. The method of claim 14 whereby the conjugate is administered in multiple doses.

19. The method of claim 14 is administered sequentially daily for several days.

20. The method of claim 14 whereby the conjugate is administered in a dose of up to 150 mCi.