FIGURE 1

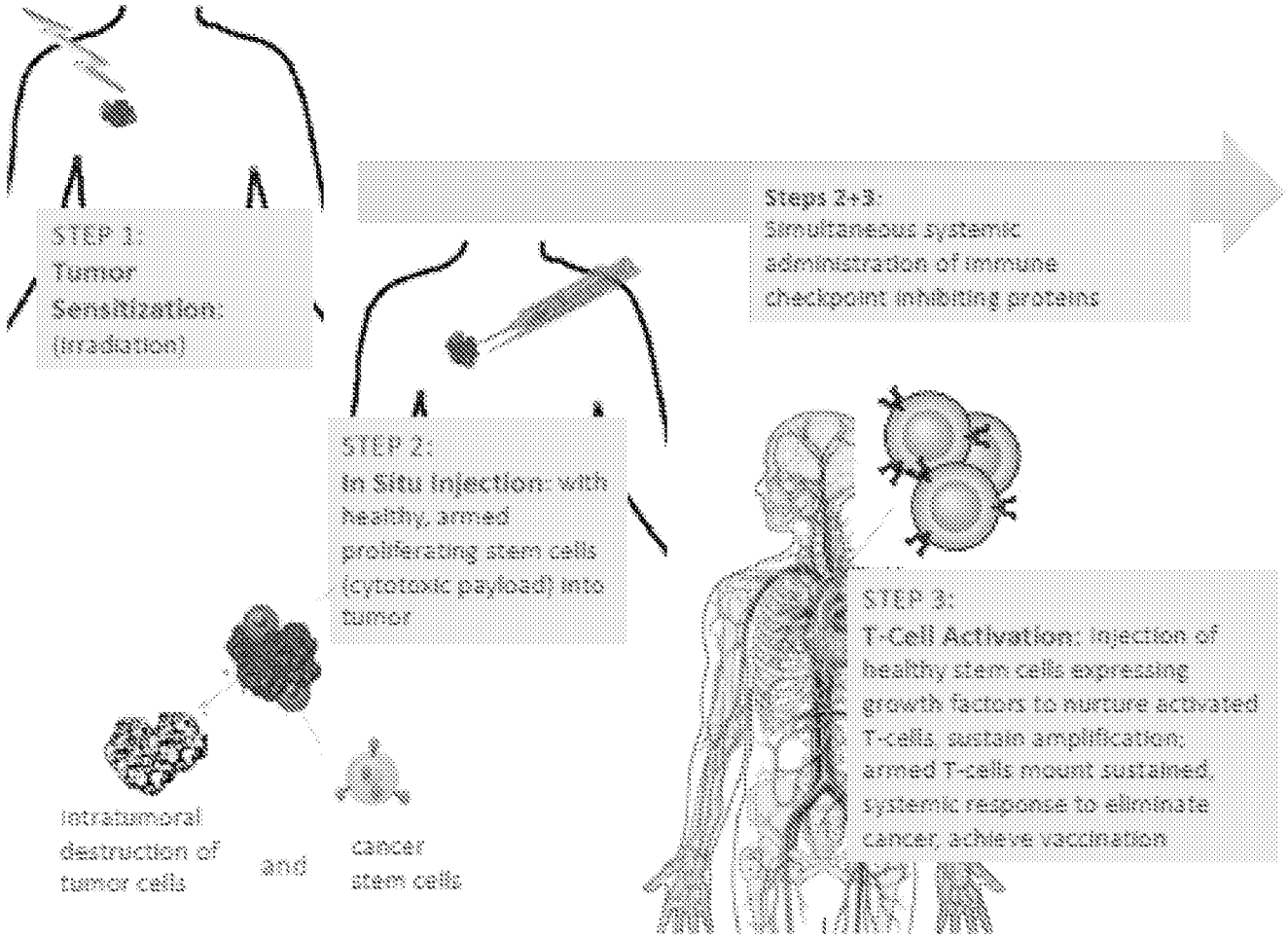

STEP 1:
Tumor
Sensitization:
(radiation)
Steps 2+3:
Simultaneous systemic
administration of immune
checkpoint inhibiting proteins
STEP 2:
In Situ Injection: with
healthy, armed
proliferating stem cells
(cytotoxic payload) into
tumor
STEP 3:
T-Cell Activation: injection of
healthy stem cells expressing
growth factors to nurture activated
T-cells, sustain amplification;
armed T-cells mount sustained,
systemic response to eliminate
cancer, achieve vaccination
Intratumoral
destruction of
tumor cells
and
cancer
stem cells

FIGURE 2

Problem	Solution
Immunosuppressive tumor microenvironment	Sensitization (e.g., with local tumor irradiation and other means) converts tumor microenvironment into an immunogenic one
Intratumoral inactivation of payload delivery system by the immune system	Intratumoral injection of protective stem cells with payload prevents inactivation
Intratumoral inactivation of the released payload by the immune system	Precise transient inactivation of specific host immune components ensures long-lasting payload presence
Inefficient tumor cell lysis	Efficient stem cell-based payload delivery, extended payload presence, tumor cell killing
Inefficient targeting of cancer stem cells	Efficient payload delivery simultaneously eliminates tumor cells and cancer stem cells (CSC's)
Inefficient T-cell induction and limited expansion	Checkpoint inhibition and growth factor release leading to efficient T-cell activation and significant expansion