

Table 1. Vaccination strategies – Advantages vs disadvantages

Vaccination strategy	Advantages	Disadvantages
Whole tumor cells	<ul style="list-style-type: none"> - Complete Ag pool of an individual tumor (including Ags that have not been identified yet) - Activation of a polyclonal and more effective immune response - The immune system rather than the vaccinologist selects the most immunogenic tumor-specific Ags 	<ul style="list-style-type: none"> - Must be made individually for each patient - Lack of co-stimulatory molecules on solid tumor cells - Immune response difficult to monitor - Induction of auto-immunity in presence of adjuvant
Dendritic cells (DCs)	<ul style="list-style-type: none"> - Presentation of the vaccine Ags to other cell types of the immune system - Expression of high levels of HLA complexes and co-stimulatory molecules - Stimulation of both naive and memory T cells 	<ul style="list-style-type: none"> - Must be made individually for each patient - Generation of DCs technically challenging - Money- and time-consuming treatment
DNA	<ul style="list-style-type: none"> - Easy and cheap to produce and purify - Require no special handling or storage conditions - Elicitation of both CD8+ and CD4+ immune responses as well as humoral responses 	<ul style="list-style-type: none"> - DNA integration into the cell genome potentially promoting malignancy - Less effective than peptide vaccines at inducing the CD8+ T cell response
Peptides	<ul style="list-style-type: none"> - Easy to manufacture - Strong CD8+ T cell response - Known sequence and biochemistry - Allow specific monitoring of the patient's immune response 	<ul style="list-style-type: none"> - Immune response limited to one or few epitopes - HLA-restriction - Degradation in absence of adjuvant
Anti-idiotypic antibodies	<ul style="list-style-type: none"> - Unrestricted HLA population - Allow effective vaccination against non-protein Ags and poorly immunogenic Ags - Elicit both humoral and cellular immune response 	<ul style="list-style-type: none"> - Human anti-mouse antibody response