Cancer immunotherapies

Propositions

belonging to the thesis "Cancer immunotherapies: challenges and opportunities for NK cells in the tumor microenvironment"

1. The level of HLA-E expression on tumor cells should be assessed for NK cell immunotherapy as high HLA-E levels inhibit NK cells but low HLA-E levels enhance NK cell responses *in vitro* (this thesis).
2. ADCC-triggering antibodies combined with KIR-HLA mismatched donor NK cells have the potential to improve NK cell-based immunotherapy considering the results in our *in vitro* models of both multiple myeloma and breast cancer (this thesis).
3. NK cell-based immunotherapy approaches using expanded NK cells are promising to target tumors that reside in a low glucose environment (this thesis).
4. NK cells degranulate and secrete IFN-γ in response to *in vitro*-generated tumor-associated macrophages, suggesting that NK cell therapy can also be utilized to target and repolarize the immune-suppressive tumor microenvironment (this thesis).
5. Selection of the optimal therapeutic strategy for each individual patient will be a next step on the road to success of immunotherapies.
6. To achieve sustained anti-tumor effects, cell therapies of expanded and/or genetically engineered immune cells combined with antibodies or other drugs are required for the majority of cancers.
7. Remaining challenges of immunotherapies include tumor resistance mechanisms and the complexity and costs of manufacturing the immune cells for adoptive cell therapy.
8. Donor-derived expanded NK cells are an ideal source for adoptive cell therapy due to their enhanced anti-tumor activity and favorable cost effectiveness compared to autologous NK- or T cell approaches (Impact paragraph).
9. There is no real ending, it's just the place where you stop the story. Frank Herbert

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