



## Adoptive immunotherapy monitored by micro-MRI in experimental colorectal liver metastasis

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Titre	Adoptive immunotherapy monitored by micro-MRI in experimental colorectal liver metastasis
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Auteur	Lechaux, David [1], Gervais, Alban [2], Dazord, Leo [3], Eliat, Pierre-Antoine [4], Franconi, Florence [5], Lemaire, Laurent [6], Rioux-Leclercq, Nathalie [7], Catros-Quemener, Veronique [8]
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Résumé en anglais	<p>In this study we used the colon carcinoma DHDK12 cell line and generated single metastasis after subcapsular injection in BDIX rats as an experimental tumor model. The aim of the work was to set up in vitro experimental conditions to prepare immune effector cells and in vivo conditions for monitoring the effects of such cells injected as adoptive immunotherapy. Dendritic cells can process tumor cell antigens, induce a T-cell response and be used ex vivo to prepare activated lymphocytes. Lymphocytes were harvested from mesenteric lymph nodes and cocultured with bone marrow-derived autologous dendritic cells previously loaded with irradiated tumor cells. In vitro, the coculture: 1) induced the proliferation of lymphocytes, 2) expanded a preferential subpopulation of T CD8 lymphocytes, and 3) was in favor of lymphocyte cytotoxic activity against the DHDK12 tumor cell line. Activated lymphocytes were injected in the tumor-bearing rat portal vein. Parameters could be set to monitor tumor volume by micro MRI. This monitoring before and after treatment and immunohistochemical examinations revealed that: 1) micro MRI is an appropriate tool to survey metastasis growth in rat, 2) injected lymphocytes increase lesional infiltration with T CD8 cells even 15 days after treatment, 3) a dose of 50 millions lymphocytes is not sufficient to act on the course of the tumor.</p>
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