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## Control in progression of a malignant lesion from onset to metastasis, utilizing an immunogenic oncofetal protein that characterizes and can destroy the lesion

It is well recognized that few instances of spontaneous regression of a malignant lesion have been reported. In general, once the genetic transformation has occurred with cells undergoing a field effect, progression of a malignant component will progress while the other sites are held in a dormant state. The host immune system seems to tolerate the without responding to presence of the malignant lesion as it continues to progress to that point that metastasis will eventually occur. Speculation as to mechanisms suggest that while foreign invaders such as bacteria and viruses express a threshold level of immunogen that can be identified by the host immune system that the malignant growth, while containing immunogenic protein, express it at levels far below what is required for recognition by the hosts immunocytes. Antigen preparation for use in clinical trials was started in the 1970's where with FDA supervision; pooled allogeneic tumor proteins were prepared. 20-30 operative specimens were used in preparing cell suspensions which were then sonicated to release surface membrane antigen. The suspension was passed over a Sephadex G-200 column to further separate those proteins in solution by M W. The cell suspension was then tested in patients by skin testing for DHR, three specific antigens were defined. mAbs were produced against them for purification and mass spec to develop a recombinant antigen. The antigens found for several malignancies examined were post translational modifications of oncofetal antigens present but in sub therapeutic levels of approximately 10-20 µgms. per entire lesion where in semi-purified form, 500 µgms were needed to elicit a clinical response. In colon cancer, the 3 antigens defined were post translational modifications of the oncofetal proteins A33, MUC5ac and CEAcam 5, 6. The mechanisms of activity of these antigens occurred via ADCC (antibody dependent cell cytotoxicity) and not a cell mediated CD8 response. Enhanced survival was defined in patients (colon cancer, pancreas cancer) with recurrent metastatic lesions having failed all known therapeutic agents who were then given the therapeutic mAbs. Expression of antigen is noted in premalignant cells adjacent to an existing tumor such as colon, lung and pancreas, etc. Failure to totally remove these cells which can be identified only by immunohistochemistry of margins of resection results in recurrent tumor.

### Biography

Myron Arlen was trained as a Cancer Surgeon at Memorial Sloan-Kettering where he remained on staff for 20 years and was involved in the surgery of advanced cancer problems and the immunotherapeutic approaches to managing the patients.

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