An Overview on Murine Model of Cancer Transplantation

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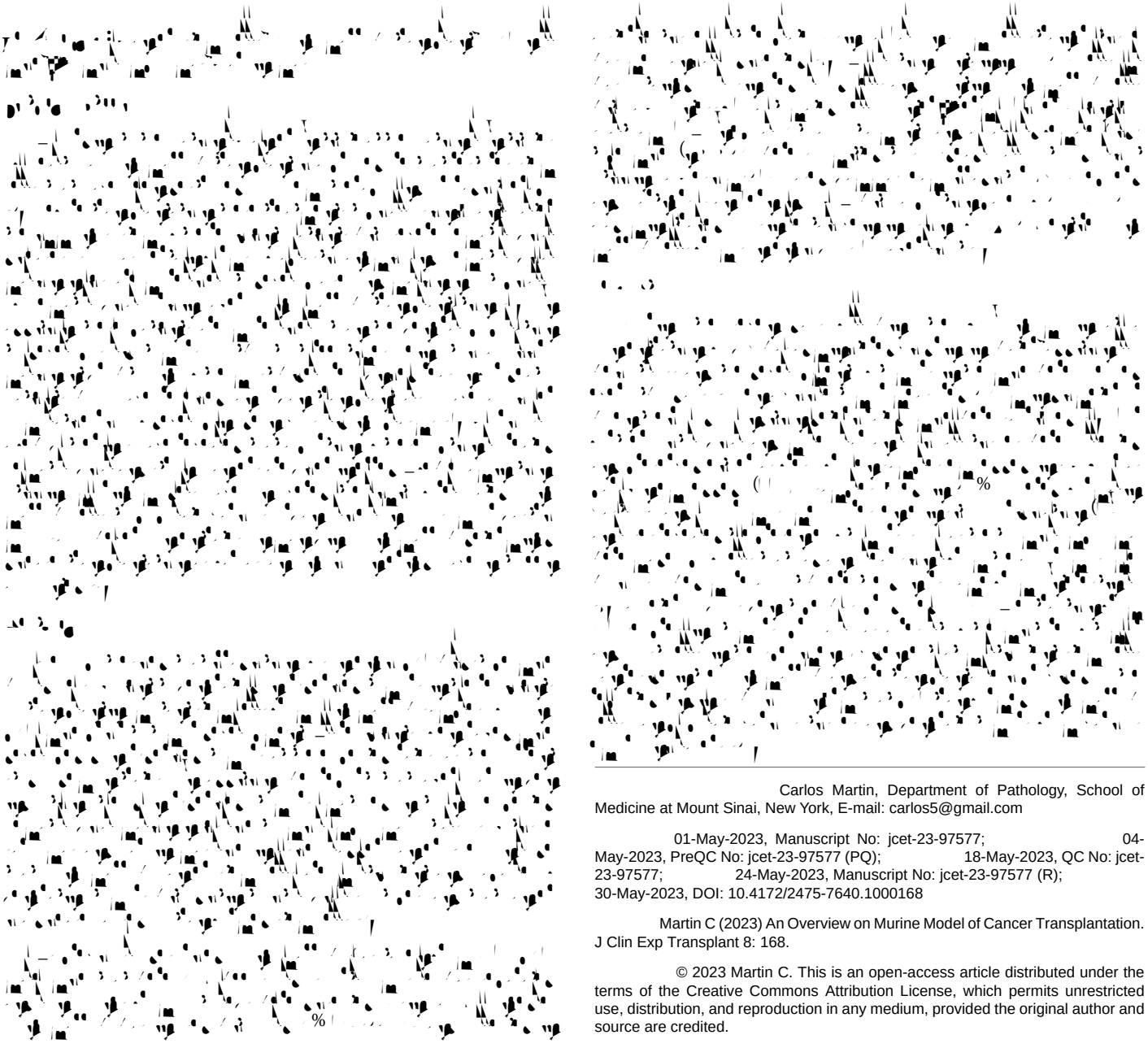
The role of cancer stem cells in neoplastic heterogeneity and tumorigenesis has received renewed attention in recent years. It has been reported that people who have bone marrow transplants are more likely to get cancer in the future; typically hematological tumors, but solid neoplasms, some of which are donor-derived, may also arise. The ability of multipotent bone marrow-derived cells to migrate to various organs and differentiate into various histological lineages has also been well documented. Using fluorescently tagged bone marrow cells from male p53 null mice to transplant them into female wild-type counterparts, the current study presents an experimental syngeneic transplantation model. We demonstrated that multipotent cancer-prone stem cells can reside in the bone marrow and are transplantable by demonstrating that transplanted non-neoplastic mutant bone marrow cells can induce distinct histogenesis tumors, such as thymic lymphomas, sarcomas, and carcinomas.



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