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## Gene therapy nursing: Clinical experience of using viral vectors

Michiko Tanaka, Yasuhiro Ikeda, Kumi Yoshida, Mariko Imamura and Yoshikazu Yonemitsu  
Kyushu University, Japan

Current trends in gene therapy affect nursing practice and research. As treatments with gene therapy progress, nurses are required to have advanced knowledge and techniques to provide nursing care for patients who undergo gene therapy. The challenges for nurses are adherence to ethical and regulatory guidelines, detailed knowledge of gene transfer and safety issues in the use of viral vectors, the ability to monitor unspecified symptoms, and the provision of non-standardized care for patients. Reflection analysis from the first-in-human phase I/IIa clinical trials for peripheral arterial disease (using Sendai-virus vector) and for retinitis pigmentosa (using lentivirus vector) revealed following reflections: 1) the importance of psychological care for patients undergoing experimental gene therapy with viral vector as an advocator, 2) to deepen understanding of biological, cytological, immunological aspects of gene therapy using viral vectors in order to inform patients, 3) the practicalities of virus administration while caring for patients following isolation control procedures and safety, 4) to require observational and assessment ability for unknown symptoms with no standard nursing diagnosis and procedures, 5) to be a lead role to coordinate in the scientific multidisciplinary professional team, and 6) adherence of ethical and regulatory guidelines. In this research, we discuss implications for specialized nursing related to the use of virus vectors in gene therapy, with a focus on peripheral arterial disease and retinitis pigmentosa.

### Biography

Michiko Tanaka has completed her BSN and MSN from California State University, Fullerton and her PhD from Department of Health Science, Graduate School of Medical Sciences, Kyushu University, Japan. She is currently working as an Assistant Professor at Kyushu University to manage translational researches, especially gene therapy.

tmiciko@med.kyushu-u.ac.jp