Precision Medicine

Accelerating the science to revolutionize cancer care

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BACKGROUND: Precision medicine in cancer care uses specific information about a person’s tumor to help diagnose, plan treatment, prognosticate, and surveil throughout the cancer trajectory. Applications exist for cancer prevention, early detection, cancer treatment, and supportive care. Several national initiatives (e.g., National Cancer Moonshot Initiative) support these efforts to accelerate this science forward.

OBJECTIVES: This article presents an overview of the way in which precision medicine is revolutionizing cancer care.

METHODS: Definitions, historic perspectives, and specific examples are provided, which illustrate the use of precision medicine in cancer care.

FINDINGS: Oncology nurses and other healthcare professionals have a responsibility to learn about the science and national initiatives supporting precision medicine, provide clear patient education messages for optimal understanding, and address challenges.

KEYWORDS
precision medicine; cancer care; National Cancer Moonshot Initiative; oncology nurses

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