Disentangling potential cellular mechanisms of chemotherapeutic-induced peripheral neuropathy

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12:00 PM to 1:00 PM
UPMC Shadyside
Hillman Cancer Center
Cooper Classroom C

Light lunch provided. Please contact Jessica Manculich (manculichjf@upmc.edu) if you plan to attend, need directions, or need more information. The Cooper Classrooms are located on the ground level of the Hillman Cancer Center, 5115 Centre Avenue, in Shadyside. After entering the building, walk to the left past the elevators. Facing the gift shop, turn right down the hallway. Room C is the 3rd door in the lobby area on the left.

Abstract: Painful chemotherapy-induced peripheral neuropathy (CIPN) is the major dose limiting side effect of chemotherapeutics as well as the primary cause for early cessation of chemotherapy. CIPN is manifest in the distal appendages in what is referred to as in a stocking-glove pattern. It is first associated with a tingling and numbness in the hands and feet. The fact that all major classes of chemotherapeutics are associated with CIPN suggests that the primary mechanism of action of each of these compounds, such as microtubule stabilization in the case of paclitaxel, is unlikely to be the mechanism primarily responsible for CIPN. Research into the underlying mechanisms of CIPN is currently focused on mitochondrial dysfunction and the release of inflammatory mediators. However, neither mechanism can account for the sensory neuron-specific nature and unique distribution of CIPN. Dr. Gold will discuss recent data from his laboratory based on a rat paclitaxel model of CIPN suggesting that the unique distribution of CIPN is not only due to the properties of specific subpopulations of nociceptive afferents innervating distal appendages, but the failure of these neurons to upregulate mechanisms that appear to be protective against the toxic effects of paclitaxel. He will also discuss recent data on the mechanisms that may account for the selective vulnerability of some subpopulations of neurons, and the protection of others.

CME Faculty Disclosure
In accordance with Accreditation Council for Continuing Medical Education requirements on disclosure, information about relationships of presenters with commercial interests (if any) will be included in materials distributed at the time of the conference.

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