Seminario: La Física del Cáncer



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"The dose-dense principle in cancer chemotherapy"

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Chemotherapy is a class of cancer treatment that uses drugs to kill cancer cells. A typical chemotherapeutic protocol consists of several drugs delivered in cycles of three weeks. We present mathematical analyses demonstrating the existence of a minimum time between cycles of chemotherapy for a protocol to be effective. A mathematical equation is derived, which relates such a minimum time with the variables that govern the kinetics of the tumor and those characterizing the chemotherapeutic treatment. Our results suggest that there are compelling arguments supporting the use of dose-dense protocols. Finally, we discuss the limitations of these protocols and suggest an alternative.

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