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MEETING ABSTRACT OP

Mediterranean diet and olive oil as complementary support for oncological patients undergoing radiotherapy: Mechanisms of radioprotection and oxidative stress reduction

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Abstract: Radiotherapy is a cornerstone of cancer treatment; however, the induction of oxidative stress in healthy tissues remains a significant clinical challenge. This presentation examines the role of Extra Virgin Olive Oil (EVOO), as the primary component of the Mediterranean diet, in supporting oncological patients. Special focus is placed on phenolic compounds, such as oleocanthal and hydroxytyrosol, which exhibit potent antioxidant and anti-inflammatory properties. By inhibiting cyclooxygenase (COX) pathways and scavenging free radicals, olive oil can act as a natural radioprotector, mitigating side effects such as radiation-induced dermatitis and mucositis. Furthermore, recent data regarding the ability of polyphenols to enhance selective apoptosis in cancer cells while shielding healthy cells from ionizing radiation are analyzed. In conclusion, integrating olive oil into the patient's diet is not merely a nutritional intervention but a strategic complementary support to enhance therapeutic response and improve overall quality of life.

Keywords: Olive oil, Mediterranean diet, phenolic compounds, cardiovascular health

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