ESSR Journal Club

Covered Article: “Physical Activity Reduces the Risk of Recurrence and Mortality in Cancer Patients”
Authors: Justin C. Brown, L. Anne Gilmore
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1) Observational cohort studies have concluded that higher volumes of physical activity after a cancer diagnosis are associated with a reduced risk of systemic cancer recurrence. What is the main limitation of this type of study design?

2) Despite the known benefits of physical activity for general health, few cancer patients are physically active. When measured objectively, what percent of cancer patients engage in a minimum of 150 minutes per week of physical activity?

3) The dissemination of cancer cells from the primary tumor to distant organs is an involved process. What are the five major steps of metastatic dissemination?

4) Physical activity may prevent cancer recurrence indirectly by changing the tumor microenvironment in the host. What are the three most common types of changes in the host microenvironment that have been evaluated to date?

5) Physical activity may prevent cancer recurrence by a direct effect on cancer cells. What is the primary process through which physical activity is hypothesized to impact cancer cells directly?

6) Additional empirical research is needed to evaluate the hypothesis that physical activity reduces the risk of systemic recurrence and mortality in cancer patients through two synergistic indirect (systemic) and direct (physical) processes. What are two examples of additional studies that may provide further empirical support for this hypothesis?

7) Randomized controlled trials are the gold-standard study to demonstrate a cause-and-effect association. What is one example of an ongoing randomized controlled trial that will examine the influence of physical activity or lifestyle program on a disease endpoint (e.g., cancer recurrence, cancer progression, or survival) in patients with cancer?