

2<sup>nd</sup> International Conference on

# CANCER BIOLOGY, THERAPEUTICS AND DRUG DISCOVERY AND DELIVERY

&

10<sup>th</sup> Annual Congress on

## BIOMARKERS, CLINICAL RESEARCH & THERAPEUTICS

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## Michael Retsky

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### Solution proposed to a 2000-year-old problem in oncology

A bimodal pattern of a hazard of relapse among early-stage breast cancer patients has been identified in multiple databases from the US, Europe and Asia. We are studying these data to determine if this can lead to new ideas on how to prevent relapse in breast cancer. Using computer simulation and access to a very high-quality database from Milan for patients treated with mastectomy only, we proposed that relapses within 3 years of surgery are stimulated somehow by the surgical procedure. Most relapses in breast cancer are in this early category. Retrospective data from a Brussels anesthesiology group suggests a plausible mechanism. Use of ketorolac, a common NSAID analgesic used before surgery was associated with far superior disease-free survival. The expected prominent early relapse events in months 9-18 are reduced 5-fold. Transient systemic inflammation accompanying surgery (identified by IL-6 in serum) could facilitate angiogenesis of dormant micrometastases and proliferation of dormant single cells and could have been effectively blocked by the perioperative anti-inflammatory agent. If this observation holds up to further scrutiny, it could mean that the simple use of this safe, inexpensive and effective anti-inflammatory agent at surgery might eliminate early relapses. Similar bimodal patterns have been identified in other cancers suggesting a general effect. Krall et al recently reported a mouse model that demonstrates this effect. Regarding the concern about postoperative bleeding with perioperative NSAIDs, clotting promoter Tranexamic acid has been effective in other surgeries. Based on their writings, Galen and Celsus knew of such an effect 2000 years ago.

### Biography

Michael Retsky (PhD in Physics from University of Chicago) made a career change to cancer research thirty years ago. He is Research Associate at Harvard TH Chan School of Public Health and Member-Manager of start-up Late Relapses, LLC. He is Editor of a Springer-Nature book on the breast cancer project published July 2017. After the diagnosis of stage IIIc colon cancer in 1994, he was the first person to use what is now called metronomic chemotherapy. He is a founder and for 10 years was on the Board of Directors of the Colon Cancer Alliance. He has published more than 90 papers in physics and cancer.

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### Notes: