Review of: "Is creeping abandon of human cancer defences evolutionarily favoured?"

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The notion that tumor defense mechanisms have been downregulated through the evolutionary history of humans is interesting. However, there are several faults with this argument, the most prominent being that the authors rely very heavily on supposition about how prehistoric societies interacted. What evidence exists from “modern” hunter-gatherer societies to support the idea of hunting groups having a single male dominating the reproductive landscape, et cetera? Also, how universal is the 38% number among human populations? Does it vary with geography? Ethnicity? Is there an interaction between these factors?

Is there anthropological evidence for a high incidence of cancers (most likely bone cancer) relative to large animal species existing in parallel, including other primates? Modern humans are extremely long-lived relative to other primates, even those maintained under ideal husbandry conditions. This suggests that the high cancer incidence in humans is more likely due to the burdens of modern society, i.e., poor diet, pollution, et cetera.

Tumors impose a huge metabolic burden, and so the idea that reduced tumor defense mechanisms would be advantageous via a reduction in caloric demands is counterintuitive. Tumors also secrete many factors that impair normal metabolic function resulting in cachexia.

Epigenetic changes are reversible and are very malleable because of lifestyle changes. It is unclear why there is an emphasis on the epigenetic regulation of tumor suppressor genes and/or proto-oncogenes.