

Propositions associated with the thesis:

## **Carcinogenesis, Prediction, and Palliative Treatment of Gastrointestinal Cancer**

1. Intestinal metaplasia is characterized by high *HOXA13* expression, which explains its phenotype and oncogenic potential. (*This thesis*)
2. Single *HOXA13*-positive cells are present in the upper gastrointestinal tract of adult humans in physiology. (*This thesis*)
3. Forced expression of *HOXA13* confers oncogenic hallmarks to esophageal keratinocytes. (*This thesis*)
4. Colonic adenomas overexpress *HOXA9*, which skews these epithelial cells towards an increase in cellular proliferation and a decrease in migration. (*This thesis*)
5. Palliative chemotherapy and targeted therapies prolong the survival of esophageal and gastro-esophageal junction cancer patients without reducing quality of life. (*This thesis*)
6. Metaplasia is the foundation for many important pathological processes, while the process itself is of a purely physiological nature. (*Paraphrase of R. Virchow, 1884*)
7. Accidental heteromorphoses suggest that the original prospective potencies are not entirely lost during development, since they are sometimes accidentally revealed in pathological states even in old age. (*G.W. Nicholson, 1923*)
8. Depending on the definition of metaplasia, it either does or does not exist.
9. If one knows from which everything became, one knows everything, including what will become.
10. The leitmotiv in developmental biology remains: “In der Beschränkung zeigt sich erst der Meister, und das Gesetz nur kann uns Freiheit geben”. (*J.W. von Goethe, 1802. “The master shows himself first in confinement, and law alone can grant us liberation.”*), as laws govern developmental biology, while in pathological processes these laws tend not to be broken, but rather bend.
11. Although people make fun of the manners of the past, they religiously obey current manners in pursuit of social rise, while losing their own insights.

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