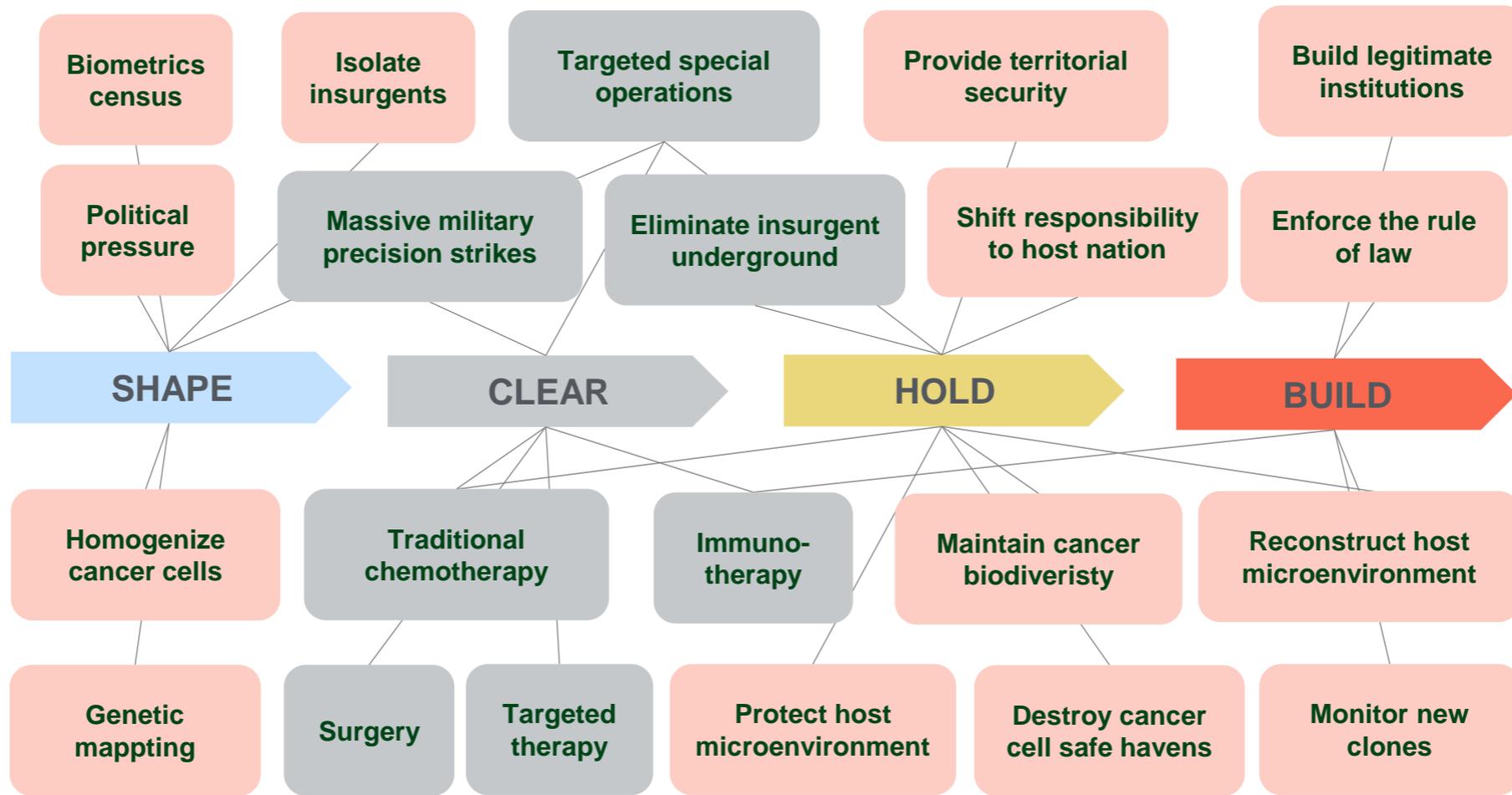


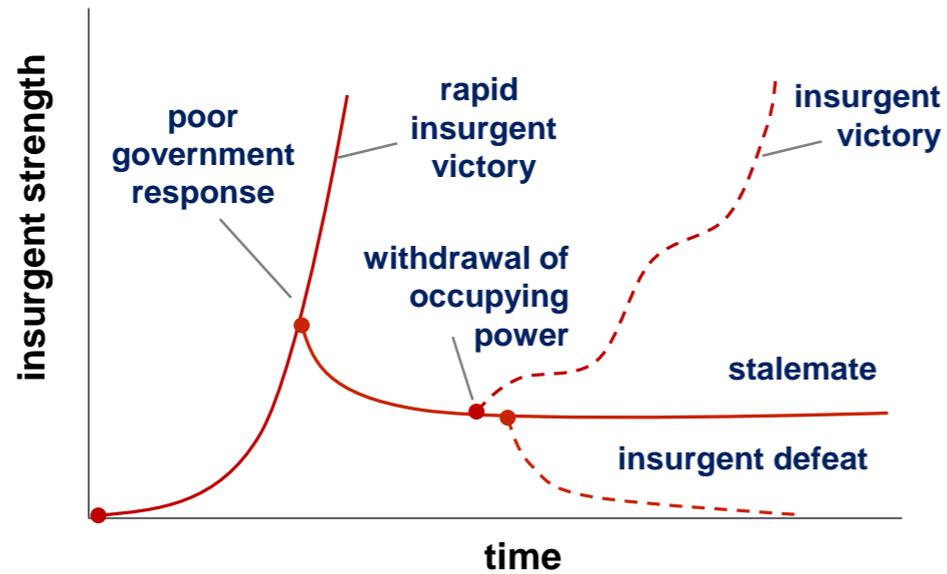
COUNTERINSURGENCY



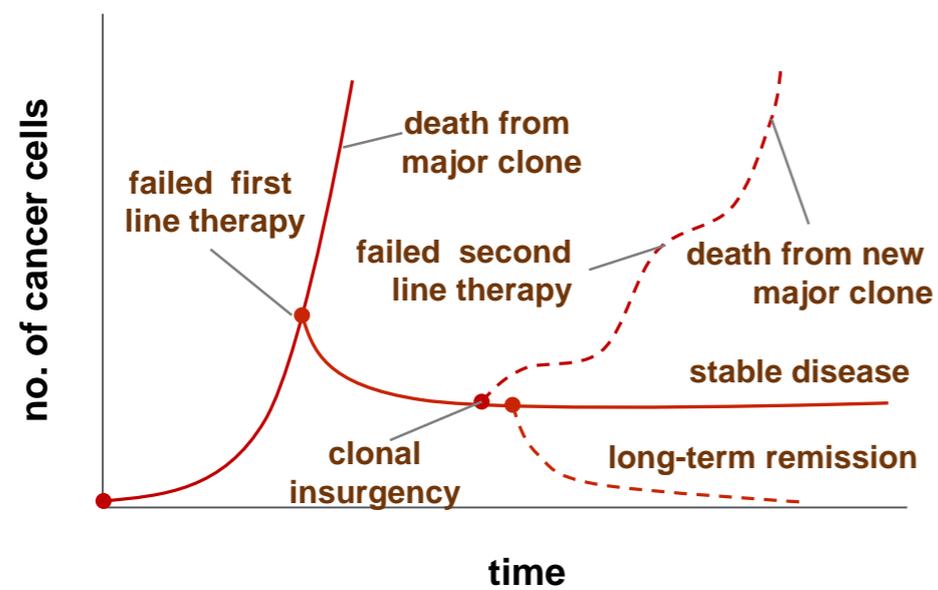
CANCER RESEARCH

**Common tactics against insurgency and cancer.** The best developed parts (grey boxes) of anti-guerrilla campaigns focus on clearing a geographic region from armed insurgents using a concentration of force. However, successful counterinsurgency requires an even larger non-military effort such as anthropologically and biometrically mapping the battlespace and shaping its politics prior to attack and holding taken ground combined with building systems for long-term regional control after a successful military campaign. In comparison, current cancer research focuses almost entirely on clearing cancer by using more or less well targeted intense therapy to knock out the dominating cancer clone(s). Relatively little effort being invested in approaches that either prepare the ground for conventional therapy or consolidate its effect over long time periods. The recent *Trends in Cancer* paper by Gisselsson and Egnell outlines underexplored strategies for shaping cancer clone landscapes, holding back cancer recurrence and rebuilding tissue after cancer surgery.

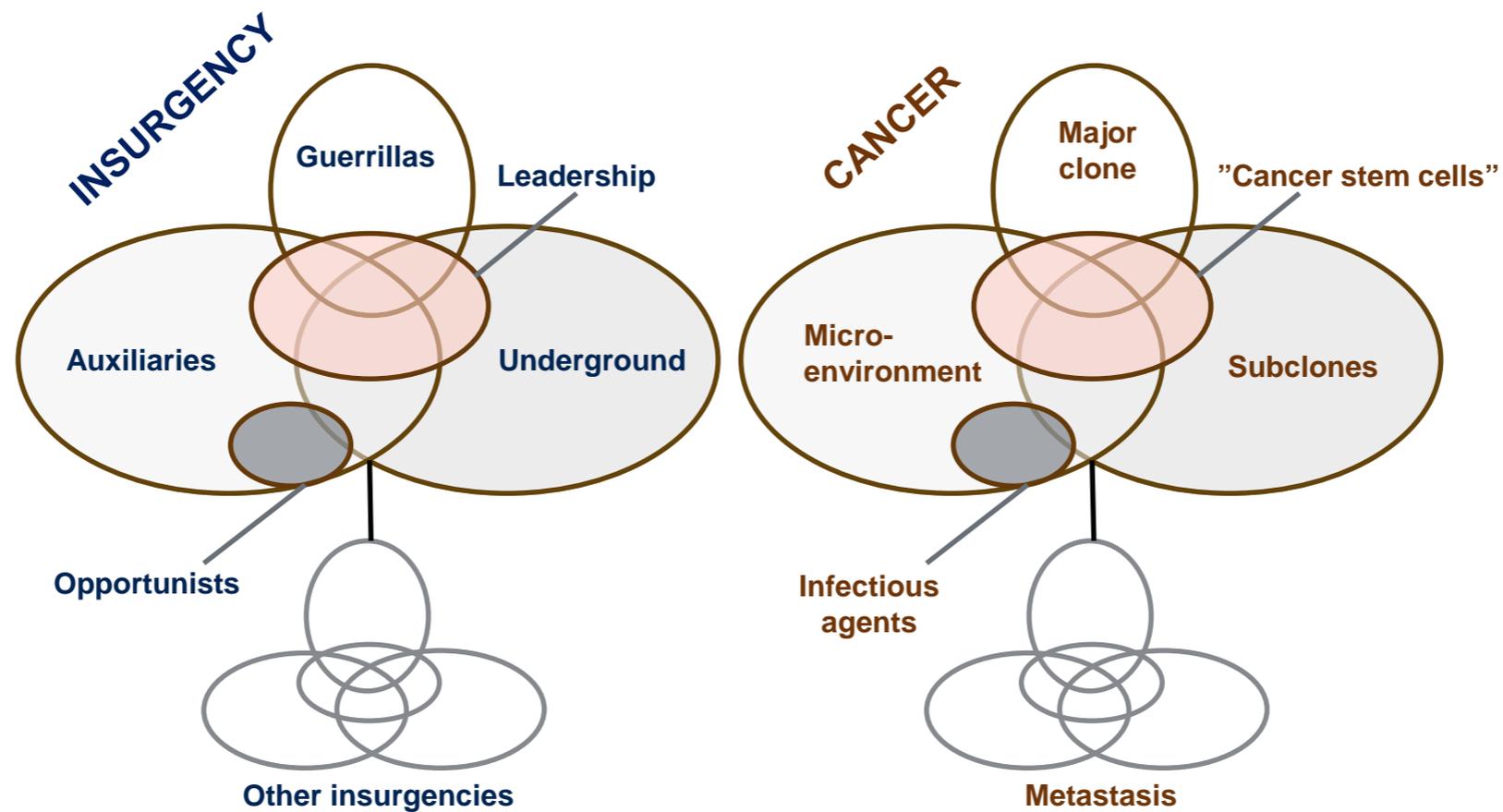
## INSURGENCY DYNAMICS



## CANCER EVOLUTION



**Common dynamics of insurgency and cancer.** Armed insurgencies (top) and tumour disease (bottom) are complex processes with similar dynamics over time. The final outcome depends on multiple factors, which interact within the battlespace of the host country/patient. Illustration inspired by the dynamics of insurgency described in the latest US Army counterinsurgency field manual (FM 3-24).



**Cancer – an insurgency of clones.** Armed insurgencies (left) and tumour disease (right) consist of networks where several different players interact over time and space. Only a small part of these networks consists of the symptomatic agents, i.e. armed guerrillas in insurgencies and the fastest growing cell population (major clone) in cancer. Simply using force to eliminate the guerrillas or the major cancer clone without other supportive measures may create a power vacuum that attracts new guerrilla groups / major clones from the underground / subclone landscape. Armed insurgents depend for their continued activity on support from auxiliary civilian structures. Similarly, stimulation from the tumour microenvironment is crucial for cancer growth. Insurgency leadership is grounded in and connects all its components. Similarly, so-called "cancer stem cells" responsible for cancer cell replenishment can be derived from several different clones and is intimately connected to the tumour microenvironment. Environments weakened by insurgency are susceptible for opportunistic destabilising activity from criminal groups, as cancer patients may be susceptible to infections. Illustration inspired by the components of insurgency described in the US Army counterinsurgency field manual (FM 3-24).