

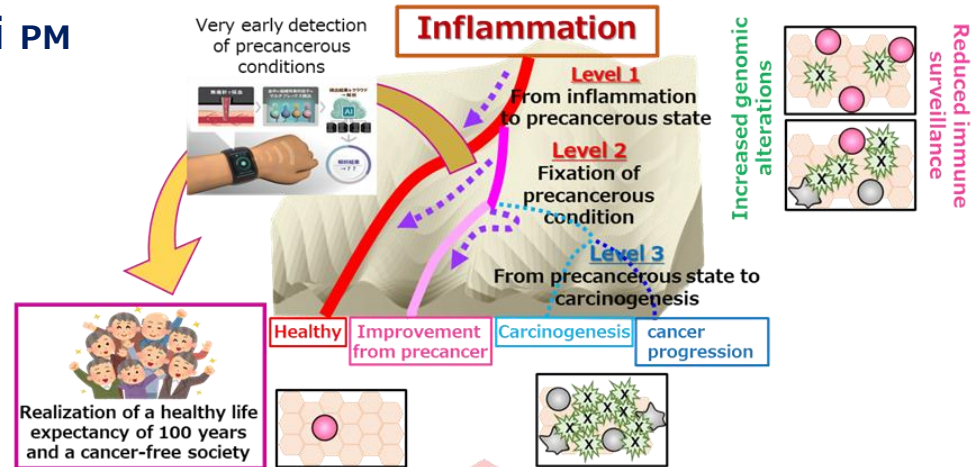


## 「Actualization of a cancer-free society through regulation of chronic inflammation」

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### Outline of R&D Project

We will elucidate the mechanism of the inflammation-precancerous state-carcinogenesis transition and establish novel technologies to detect cancer-initiating cells at an ultra-early stage based on immune-genomic analysis. We will also work on preventive medicine and new drug discovery / development using wearable devices, etc. The Japan-U.S. team will strongly pursue this program to realize a "society with zero incidence of cancer".



Tight collaboration with the U.S. team

**Cancer Immunology :** Jedd Wolchok **Cancer Genome :** Matthew Meyerson  
**Cancer Epidemiology :** Philip Castle  
**Clinical Trial of Cancer Immunotherapy :** James Gulley



### Expected Breakthroughs by 2040

- The realization of prediction of the risk of carcinogenesis induced by chronic inflammation for each individual by elucidation of the mechanisms that determine the transition of inflammation - precancerous state - carcinogenesis, and integrating the study with mathematical modeling research based on large-scale cohort data.
- Establishing a new platform for comprehensive immune-genomic analysis to detect the emergence of cancer-initiating cells as well as changes of intra- and intercellular networks at an extremely early stage.
- Development of a novel in vivo monitoring system using easily collected specimens to optimize when and to whom medical intervention is required, thereby realizing prevention and ultra-early preemptive medicine.