

Proposed Bioelectric Dissonance Pathway to Cancer

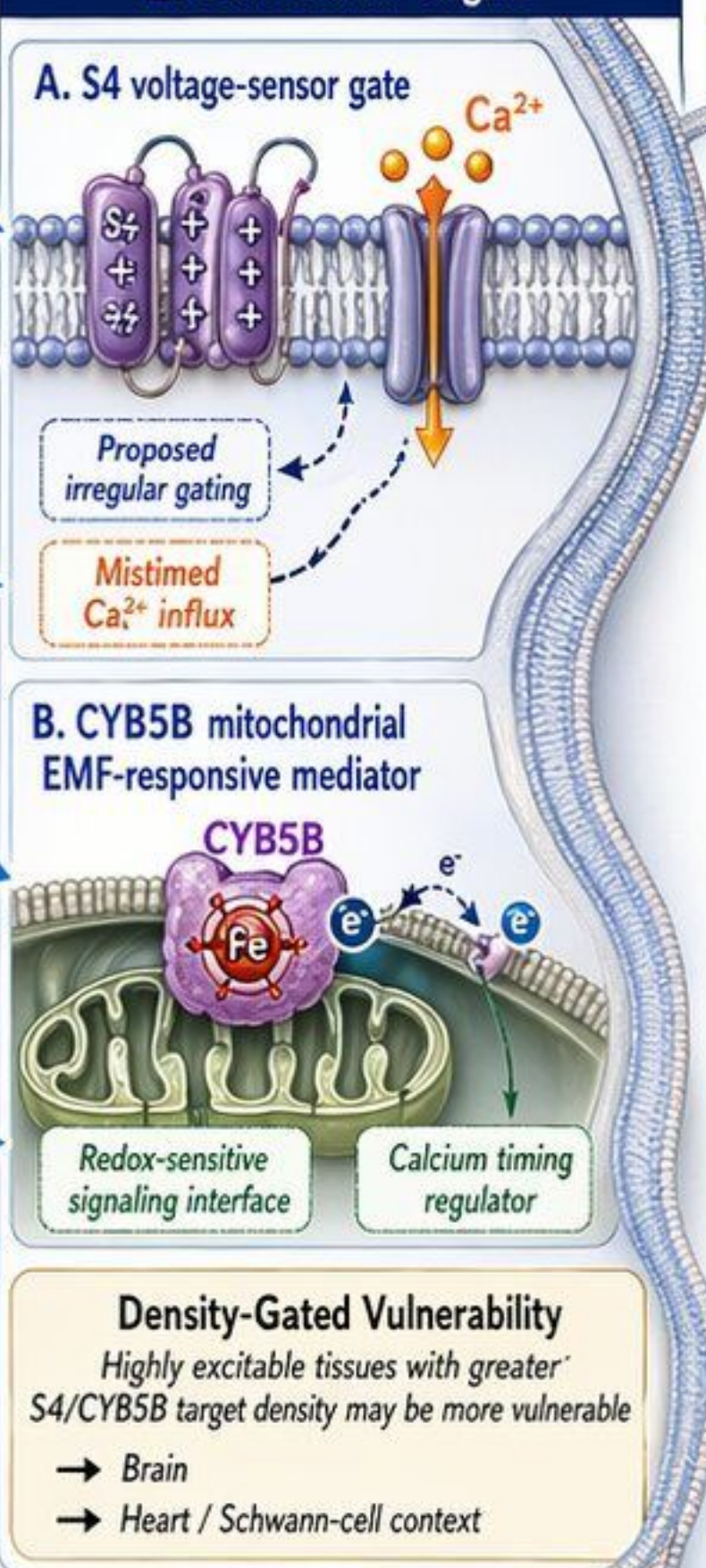
RF/ELF pulse structure → S4/CYB5B calcium-redox disruption → oxidative stress, genomic instability, and density-gated tumor outcomes

Proposed mechanistic integration
Biologically grounded synthesis, not settled proof

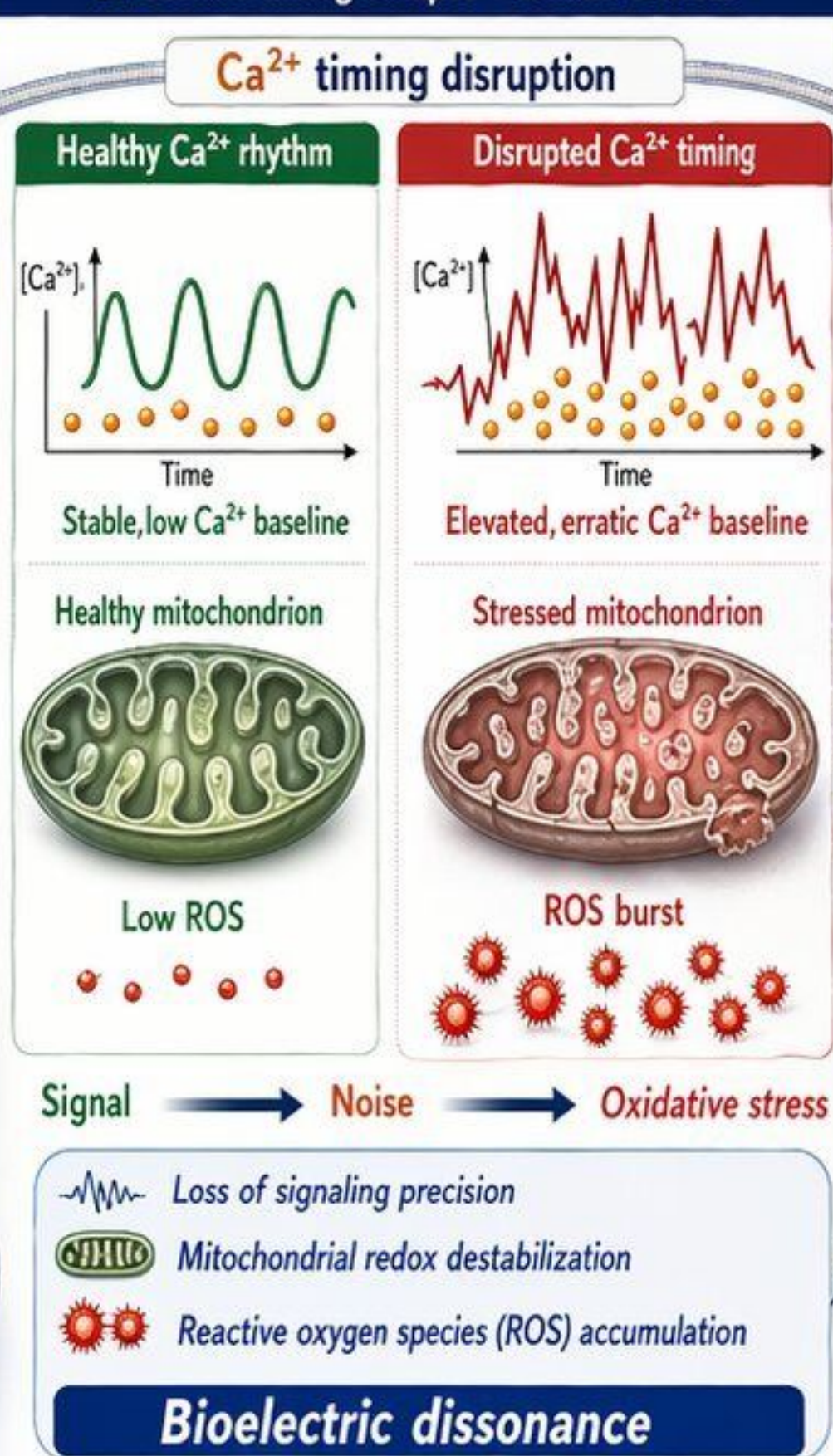
1. Modulated RF / ELF Exposure



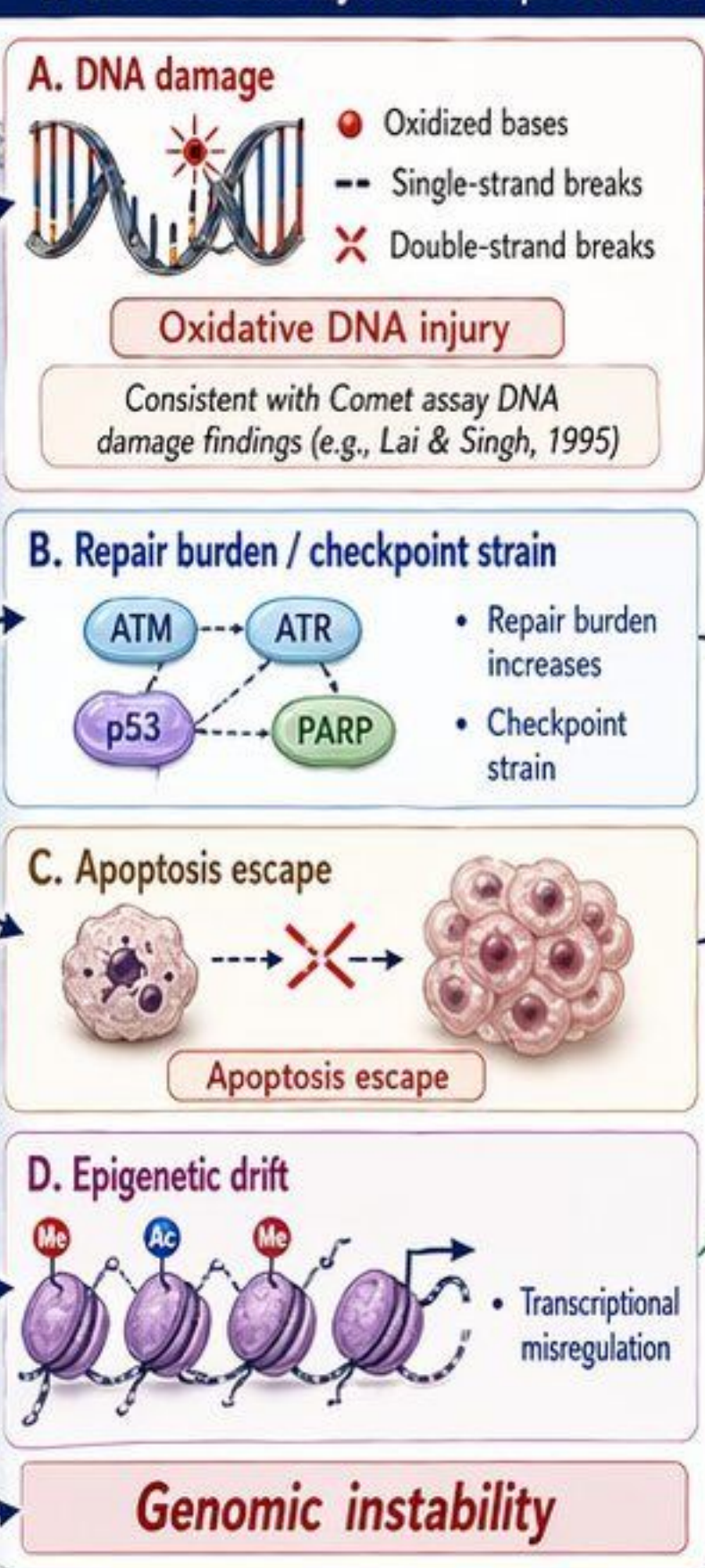
2. Dual Cellular Targets



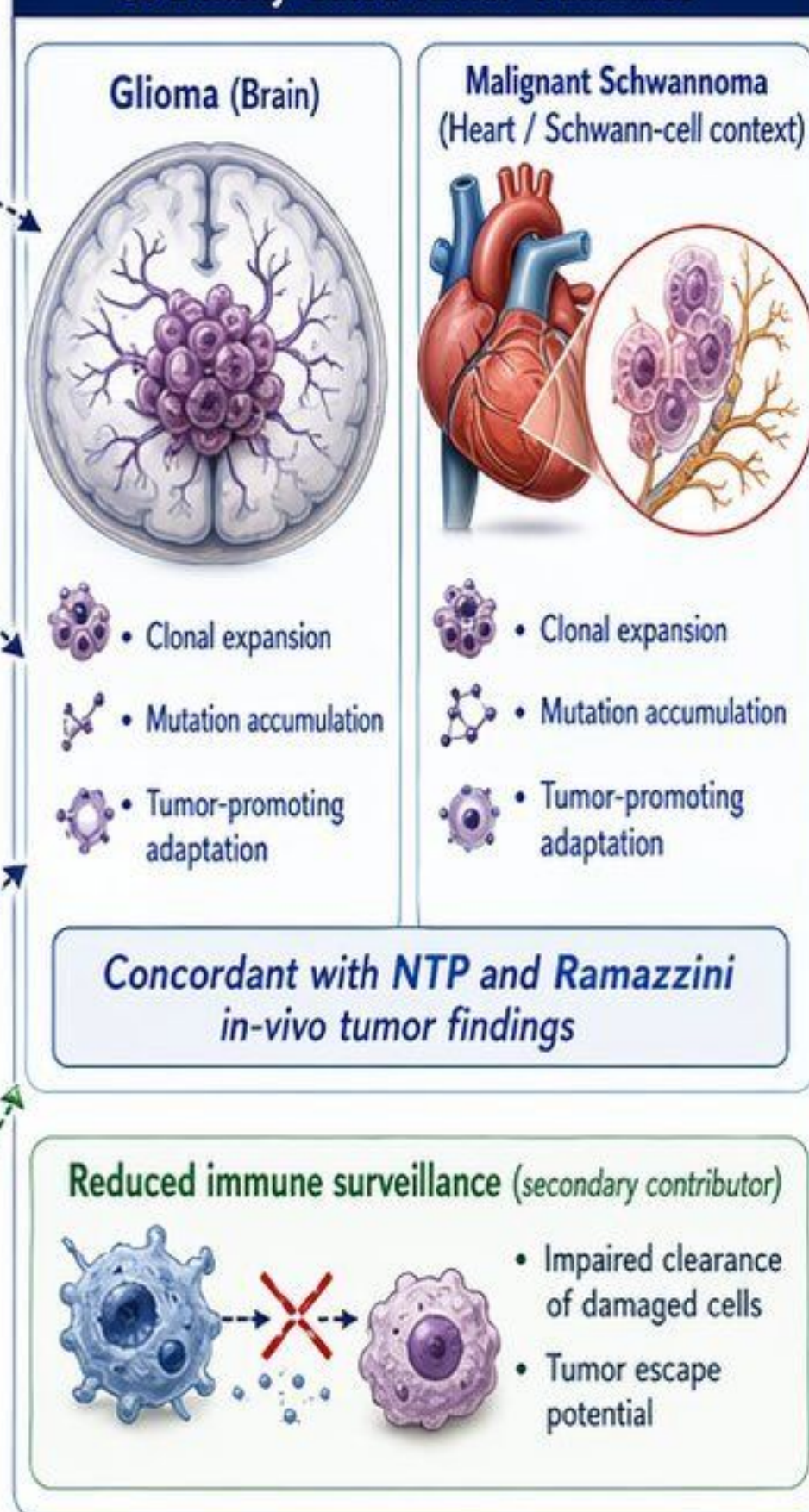
3. Calcium timing collapse + oxidative stress



4. Genomic instability and maladaptive survival



5. Density-Gated Tumor Outcomes



LEGEND: Line meanings

- Solid = established biology
- - - Dashed = proposed bridge
- Dotted = downstream interpretation

PATHWAY SUMMARY

RF/ELF modulation → S4/CYB5B disruption → Ca²⁺ timing noise → oxidative stress →
DNA damage + apoptosis escape → genomic instability → density-gated tumor outcomes

EVIDENCE ANCHORS

- Lai & Singh (1995): Comet assay DNA strand breaks
- NTP: glioma and heart schwannoma signals
- Ramazzini Institute: lifetime exposure tumor findings