

Compiled Biological Knowledge

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Contents

1 Hallmarks of cancer

1.1 Six original hallmarks of cancer

1. Sustain Proliferative Signaling
2. Evading Growth Suppressors
3. Resisting Cell Death
4. Enabling Replicative Immortality
5. Inducing Angiogenesis
6. Activating Invasion and Metastasis

1.2 Additional "enabling" and "emerging" hallmarks

1. Enabling: Genome instability and mutation
2. Enabling: Tumor-promoting inflammation
3. Emerging: Reprogramming energy metabolism
4. Emerging: Evading immune destruction

2 Intracellular circuitry of relevance in cancer

Circuit 'outputs' or results include:

- Gene Expression
- Cell Proliferation

2.1 Wnt signaling pathway (simplified)

2.1.1 WNT + Frizzled -> Dishevelled

2.1.2 Dishevelled -> GSK-3Beta

2.1.3 GSK-3Beta -> APC

2.1.4 APC -> Beta-Catenin

2.1.5 Other Cell + E-Cadherin -> Beta-Catenin

2.1.6 Beta-Catenin + TCF -> Changes in Gene Expression

3 References

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