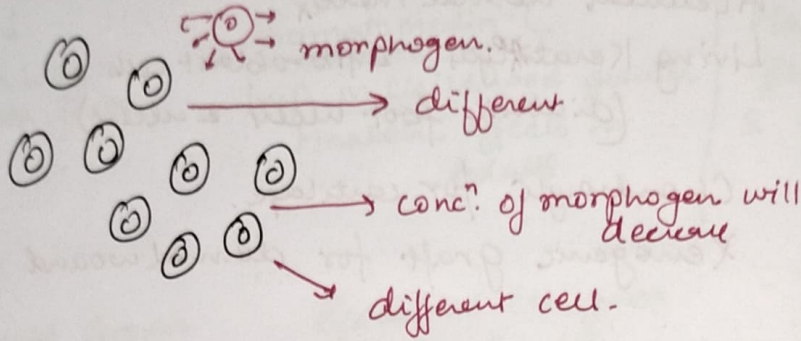
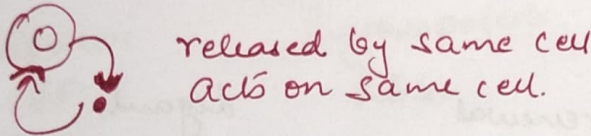


Cell is residing



Autocrine

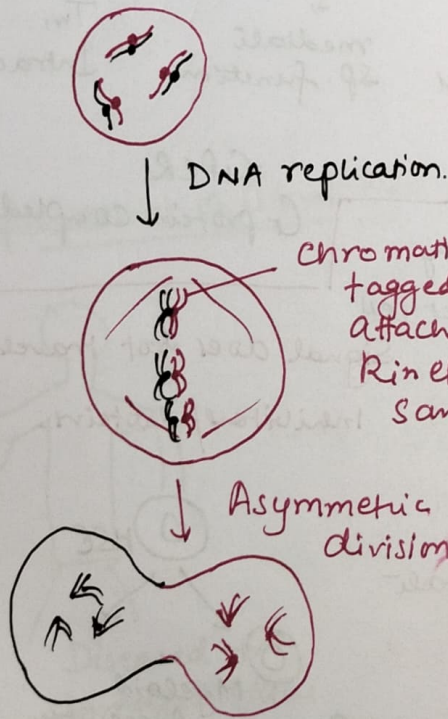


Transit Amplifying Cell

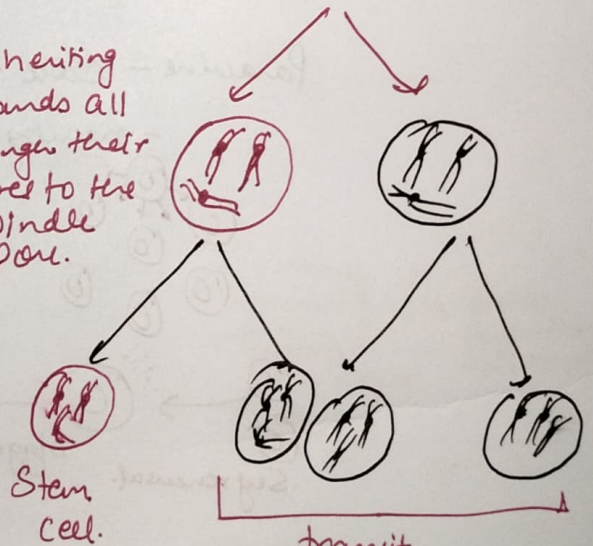
○ frequently divide.
But with fixed lifespan.

○ Stem cells divide upon signal

○ Stem cells proliferation very fast.



Immortal tagged DNA strand



* Label retaining cells.

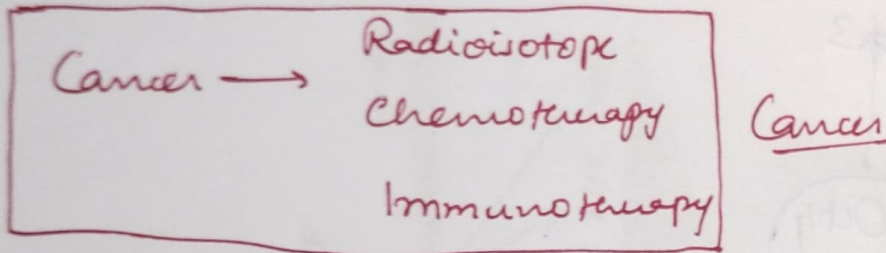
* Segregating their DNA strands asymmetrically

* Original label strand → daughter stem cells.

→ freshly synthesized strand → Potency

* Old Labeled Strand → retained in stem cell generations after generation.

↓
* 'Immortal Strand'



- * Stem cells maintain/retain labeled DNA indefinitely
- * Asymmetric cell division is fundamental stem cell property.

Stem Cell Signaling

→ self renewal and differentiation potential

→ Yamanaka factors - Sox-2, Oct 4, Klf-4, & c-Myc.

- Octamer binding transcription factor-4 (Oct 4)
- Sex determining region 4 box-2
- Kruppel-like factor-4. (Klf-4)
- c-myceloytomatosis (c-Myc)

plays key role in maintenance of pluripotency.

