

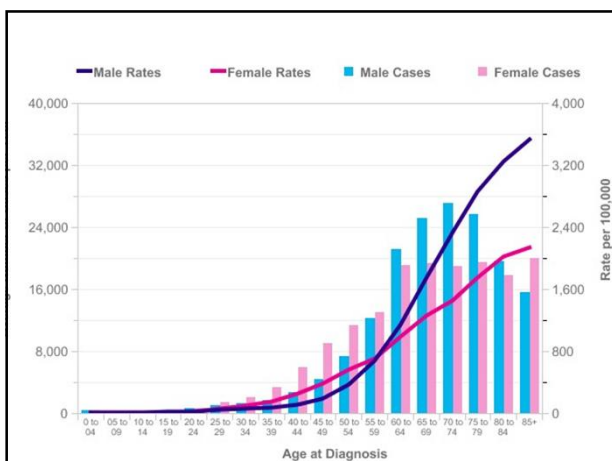
## Why is cancer a disease of the old, but sometimes of the young?

Han van Krieken, Nijmegen, the Netherlands

Radboudumc

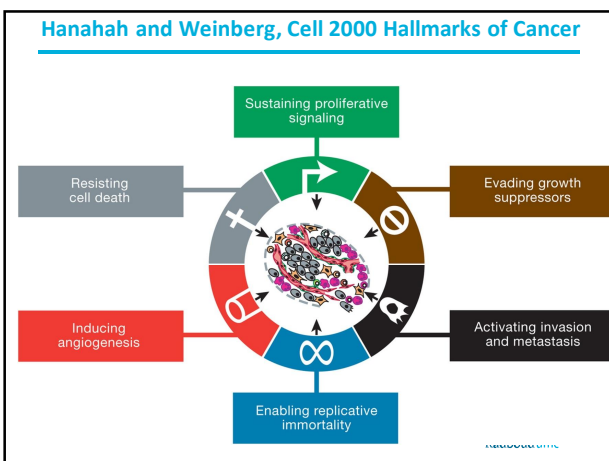
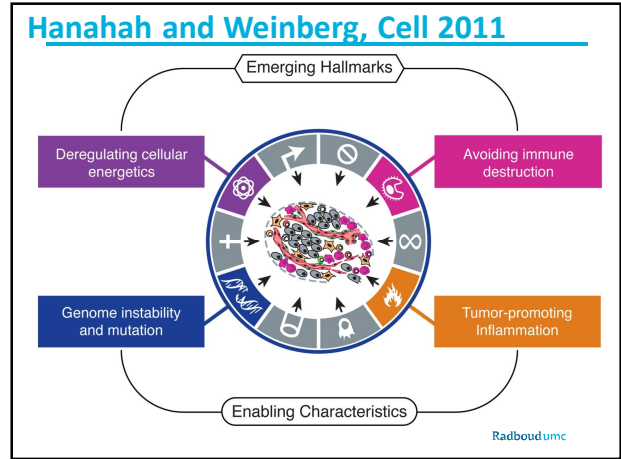
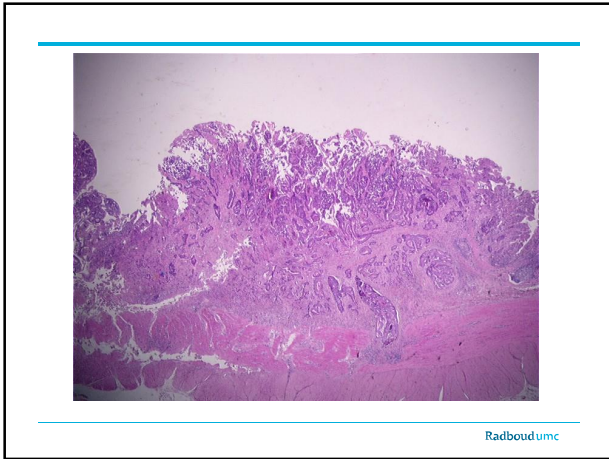
## Why is cancer a disease of the old?

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## What is cancer?

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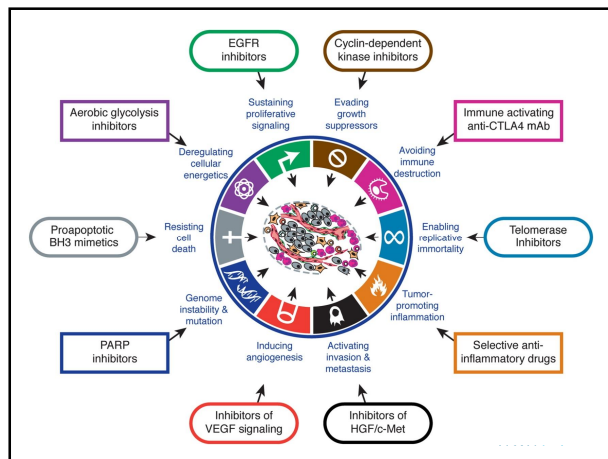
### The cancer stem cell

- ~ A long living cell that acquires at least 6-8 genetic alterations in different categories of processes
- ~ Little turnover
- ~ Hidden
- ~ Hard to find
- ~ Hard to hit

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## Why is cancer sometimes a disease of the young?

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## Cancer in children and young adults

- ~ Hereditary syndromes
  - ~ Li Fraumeni
  - ~ Lynch
  - ~ Wiskott-Aldrich
  - ~ Many, many others
- ~ Rare
- ~ Simple

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## Issues for pathologists

- ~ Subspecialisation
- ~ Molecular Pathology
- ~ Tumour board

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## Conclusions

- ~ Cancer is a disease of genes but rarely hereditary
- ~ Rare cancers are the most common cancers
- ~ Cancer is closely related to evolution
- ~ The cancer stem cell is the holy grail in treatment

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