

Understanding Cancer

**A SERIES OF SIMPLE EDUCATIONAL VIDEOS
FOR THE GENERAL PUBLIC**



By Dr Hafsa Waseela Abbas

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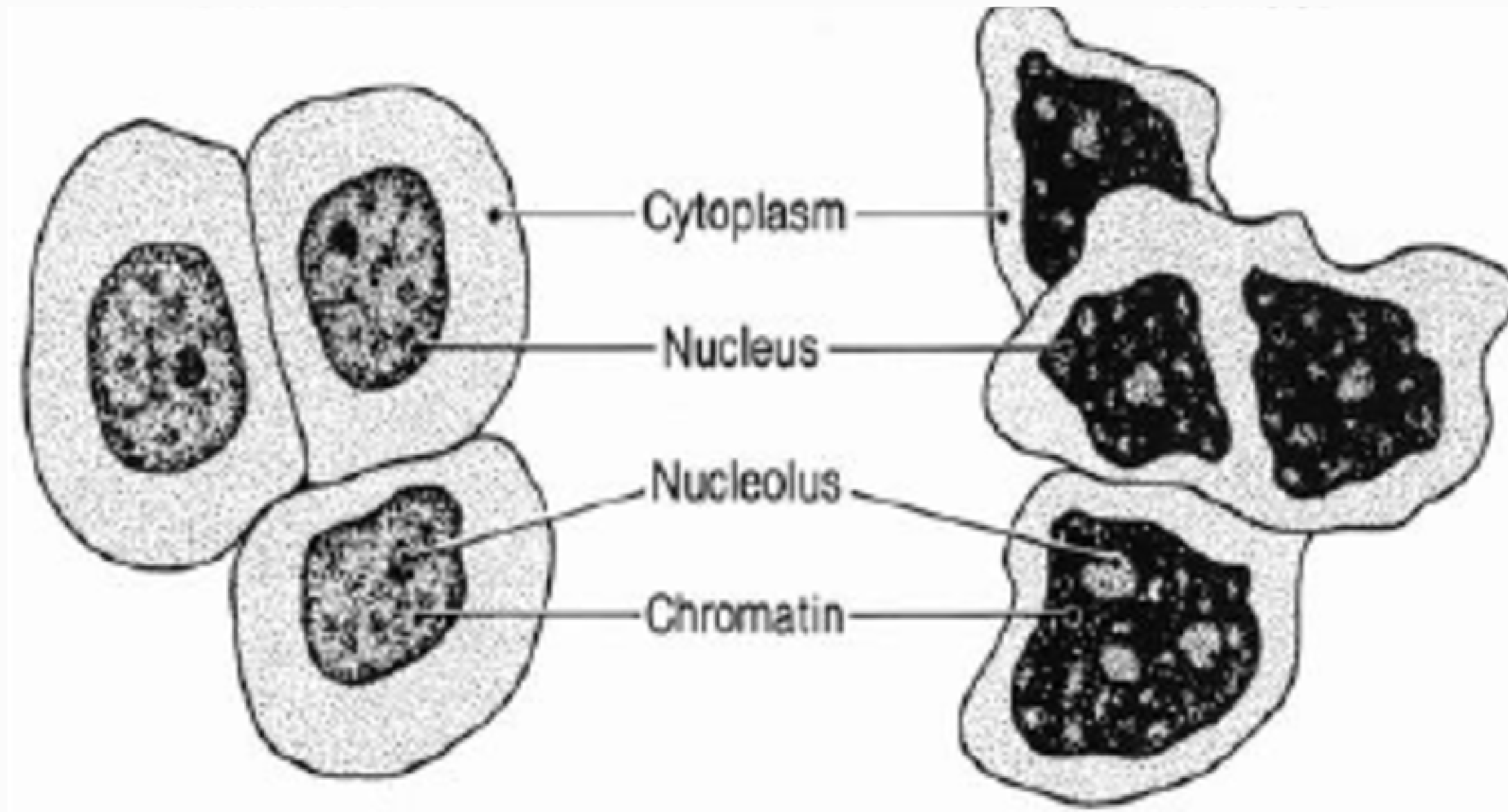
The background of the slide features a microscopic view of cells. A large, prominent cell with a yellowish, textured nucleus and a blue, irregularly shaped cytoplasm is in the foreground on the left. Other similar cells are visible in the background, slightly out of focus. The right side of the slide has a solid light green background with a yellow wavy shape at the bottom.

Understanding Cancer

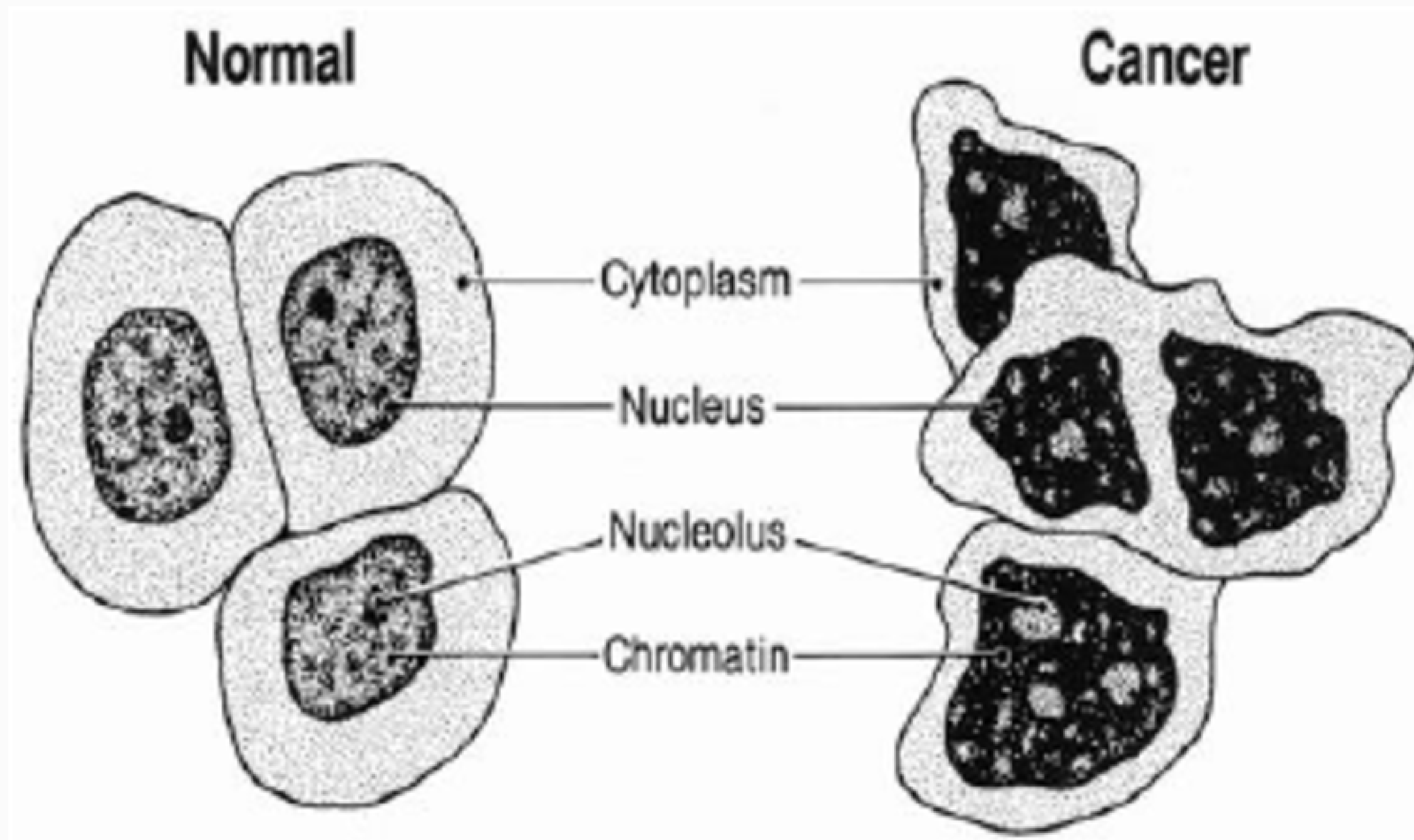
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Part 2: What is a cancer cell?

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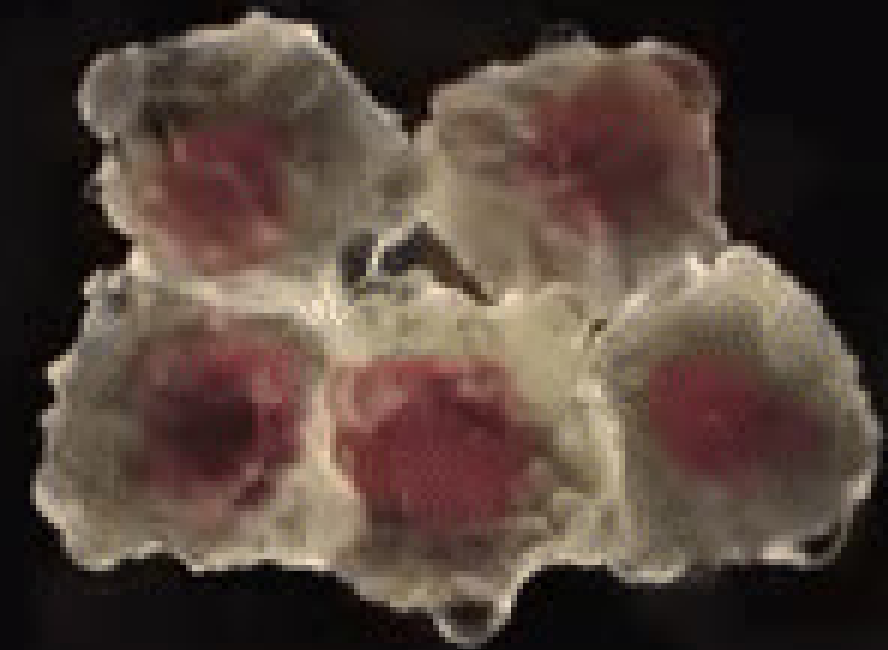


***Which cell do you think is the cancer cell?
What changes have you noticed on these cells
compared to the normal cell?***

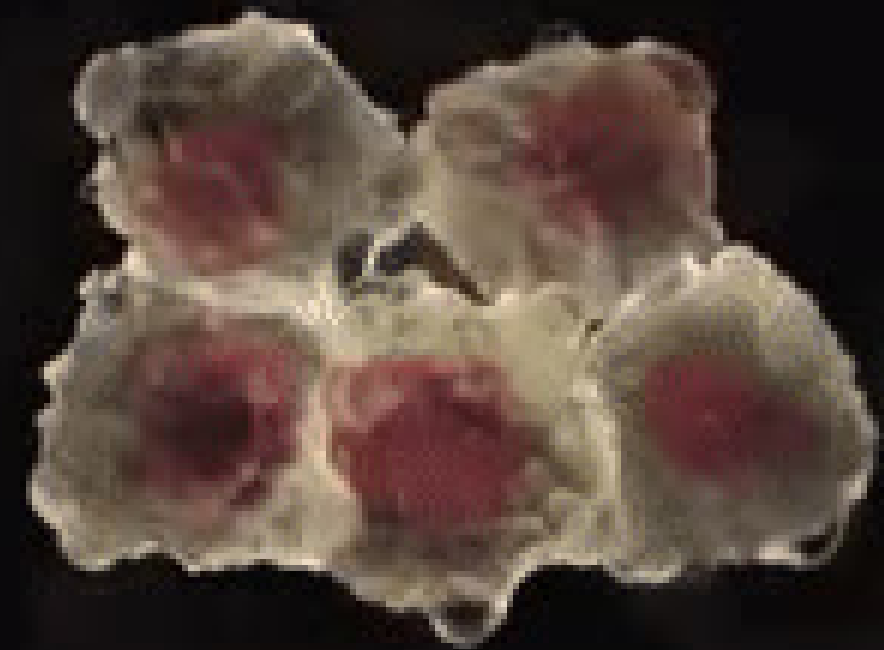


Shape
Size
Features
Arrangement
Number of
nucleus

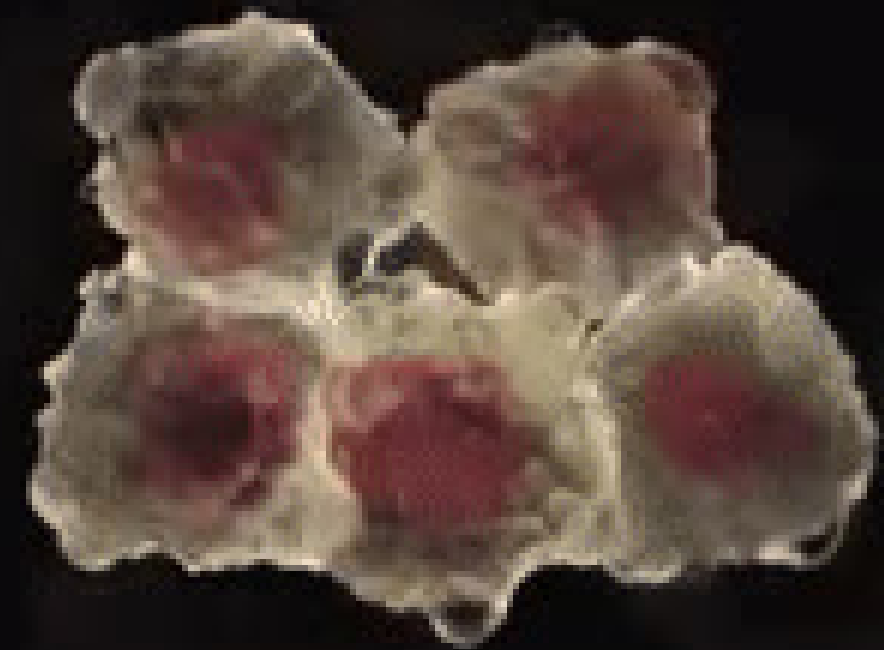
Cancer cells:
They
continue to
cell divide
and grow in
size



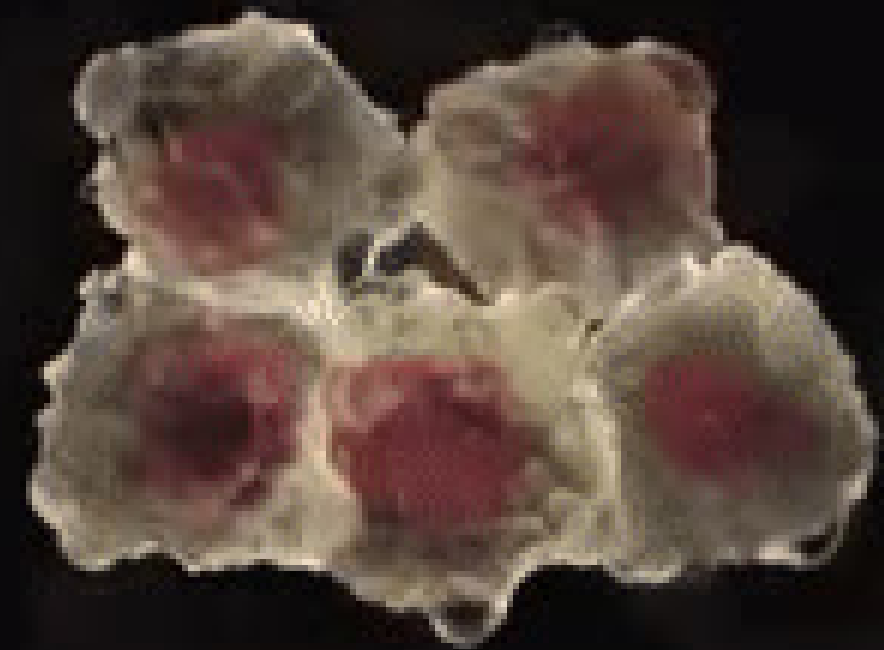
**Cancer cells:
They ignore signals
from other cells**



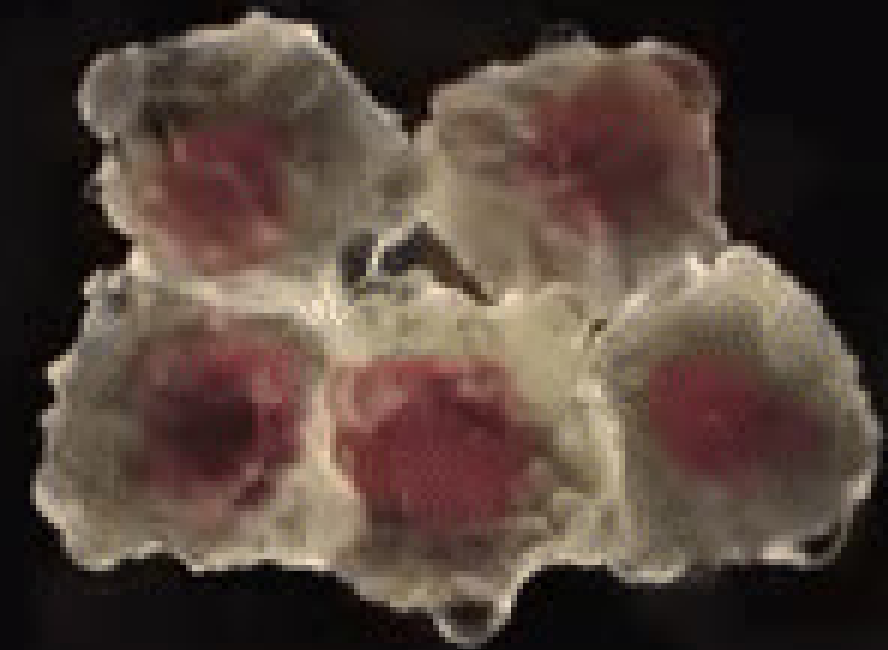
**Cancer cells:
They do not
stick together**



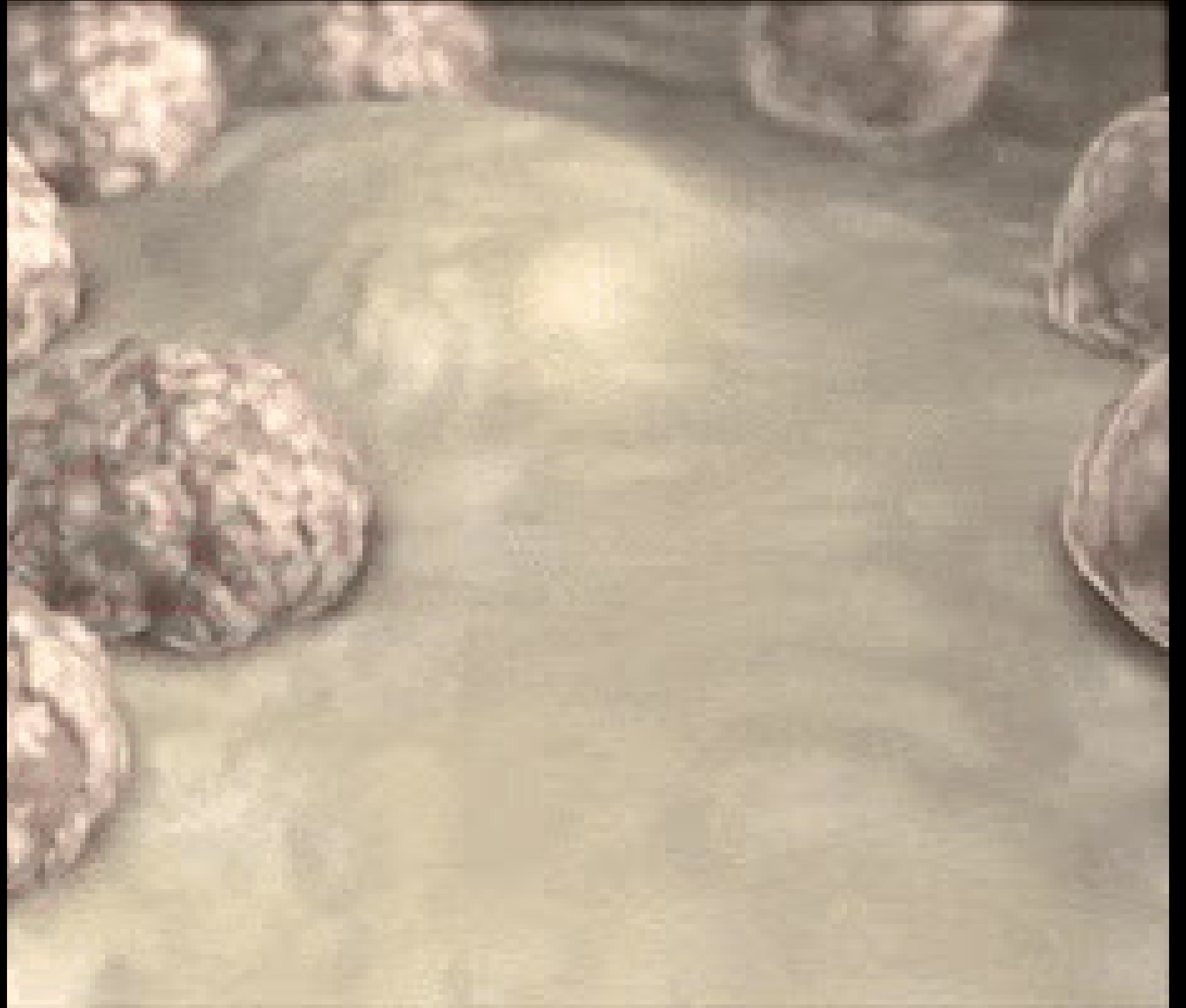
**Cancer cells:
They do not
specialise**



**Cancer cells:
They do not
repair
themselves
when damaged.**

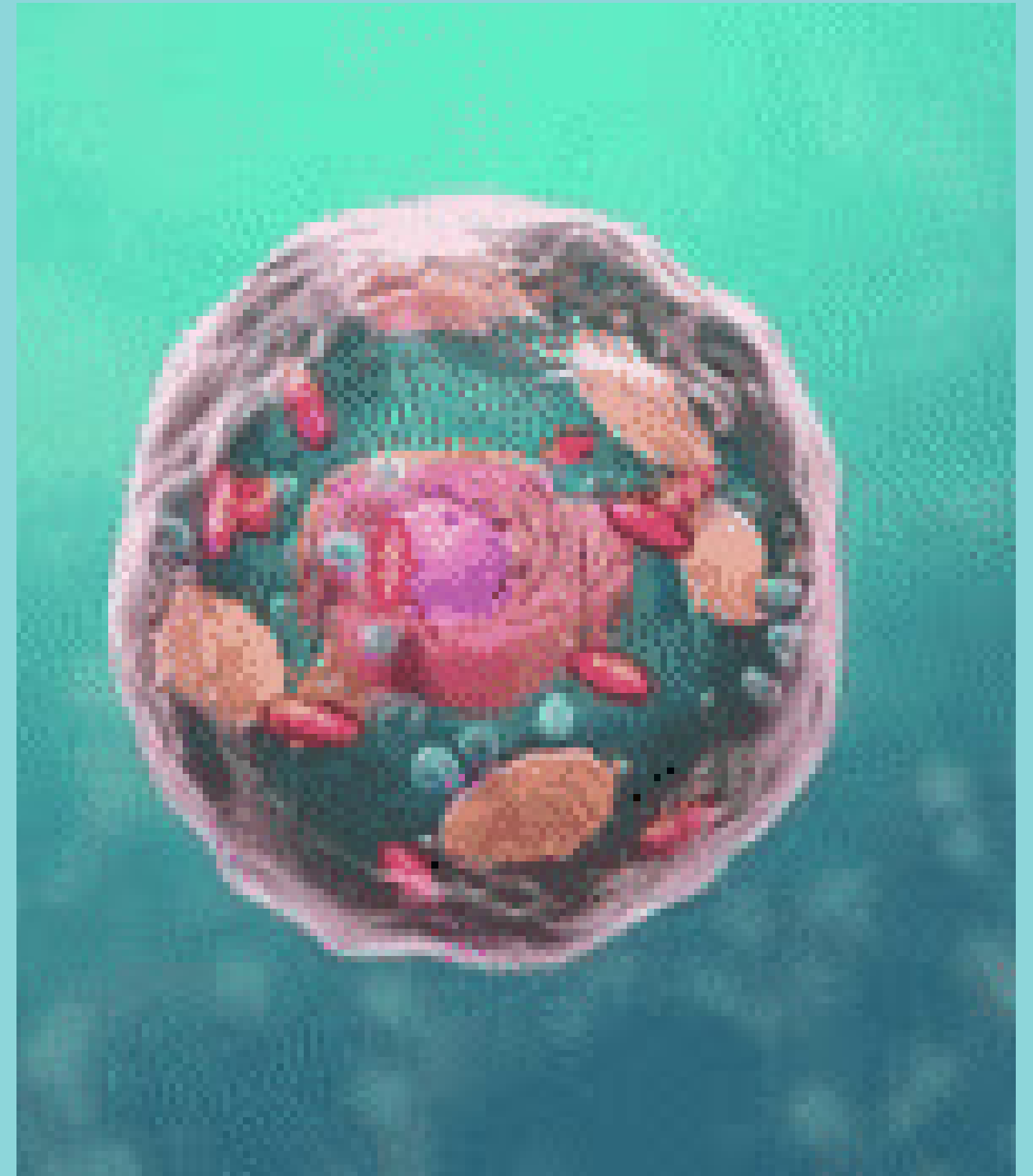


**Cancer cells:
Some cancers do
not form tumours
e.g. blood cancers
where there is a
build up of
abnormal blood
cells.**

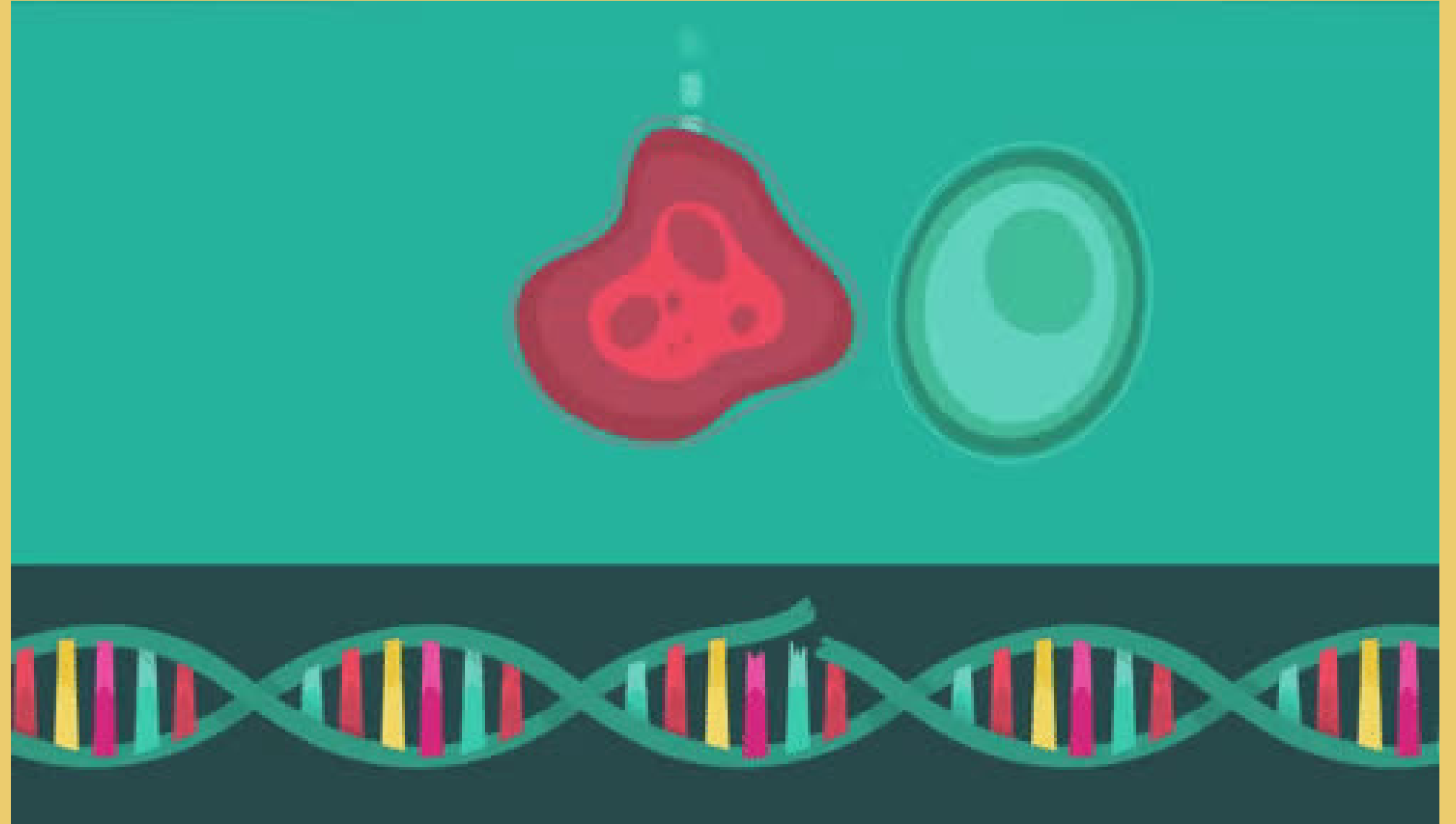


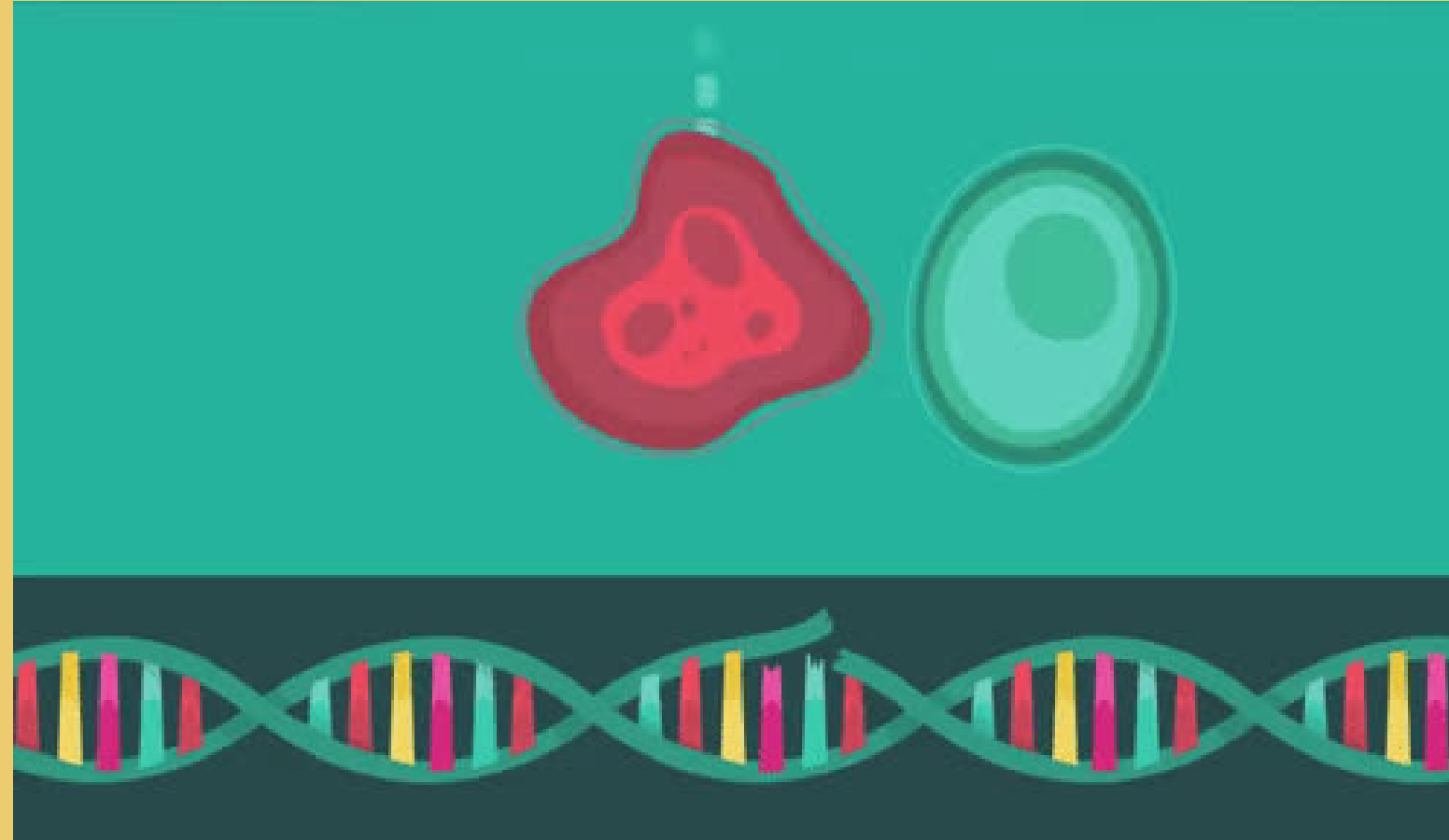
**Normal cells stick
together and
respond to
signals.**

**They self-destruct
when become old
or damaged.**



**What causes
a cancer cell
to grow?**





The nucleus contains genetic information (DNA).

A change in a gene is called a mutation.

Some mutations causes cancer to divide and grow.



UV radiation

Sun

X-ray

**Some mutations occur
naturally, some are caused by
the environment.**

Smoking

Chemicals

Some food chemicals

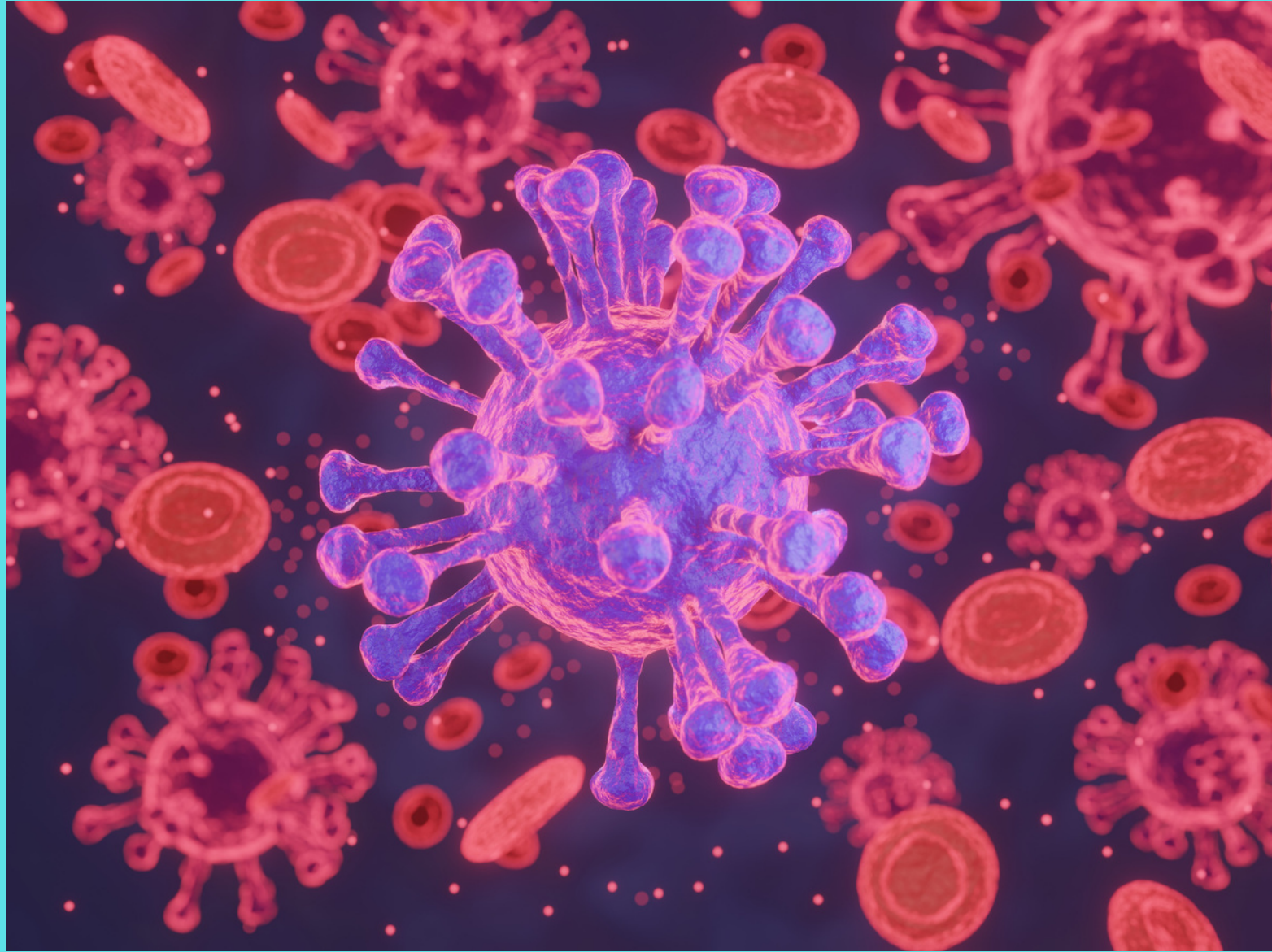


Protooncogene

Normal genes that can become driver mutations (oncogenes) that allows cancer cells to grow.

Tumour suppressor genes

Some genes slow or stop cancer growth by repairing DNA damage or to self-destruct.

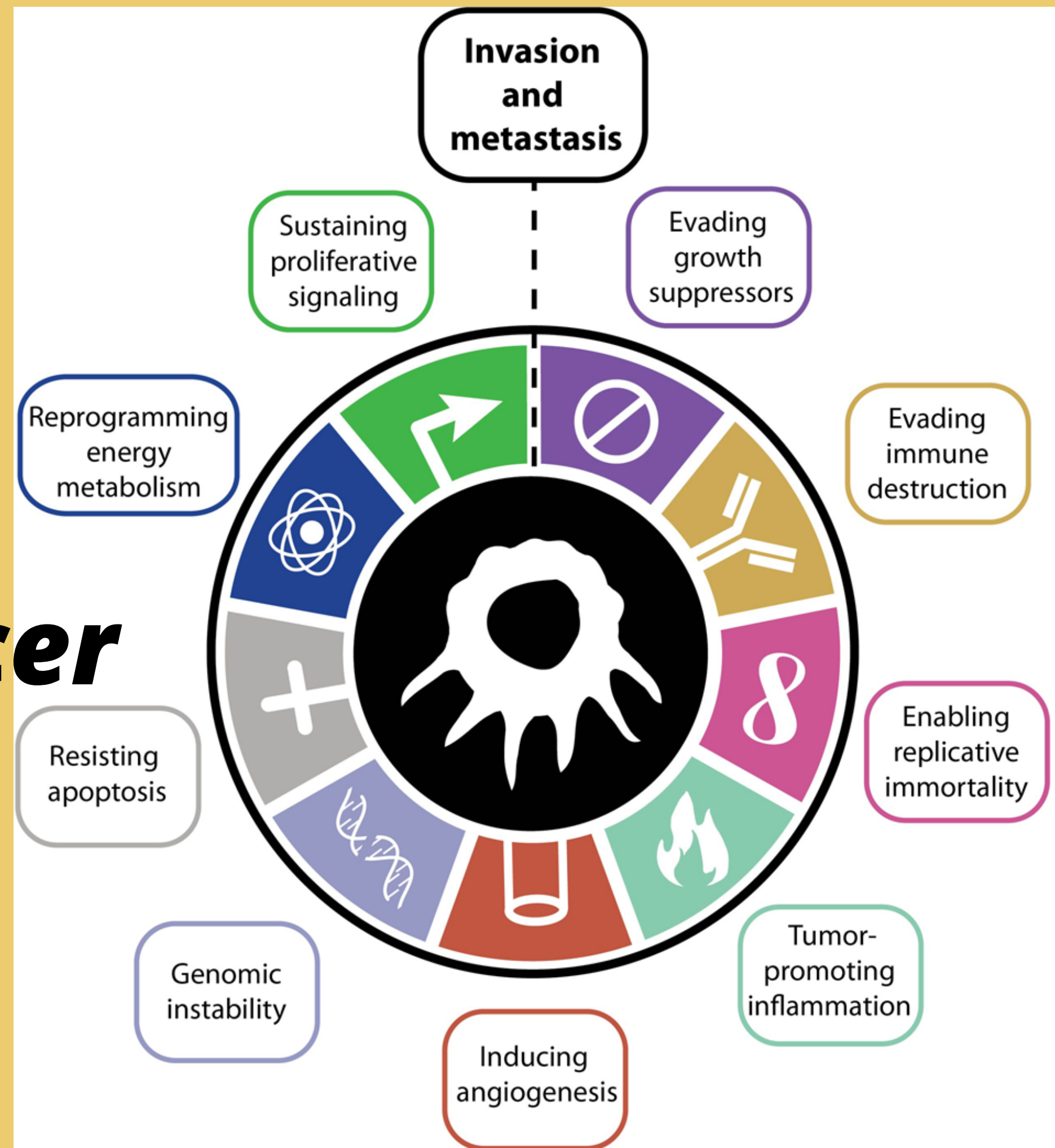


Most cancer cells have mutations in tumour suppressor genes and oncogenes affecting their behaviour.

**The
characteristics of
cancer cells is
summarised as:**

Hallmarks of Cancer

By Hanahan and Weinberg



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Part 3: How do cancer cells spread?

UPCOMING VIDEO RELEASING SOON!!

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Acknowledgements

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Canva

Paint

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***Thank
you!***

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