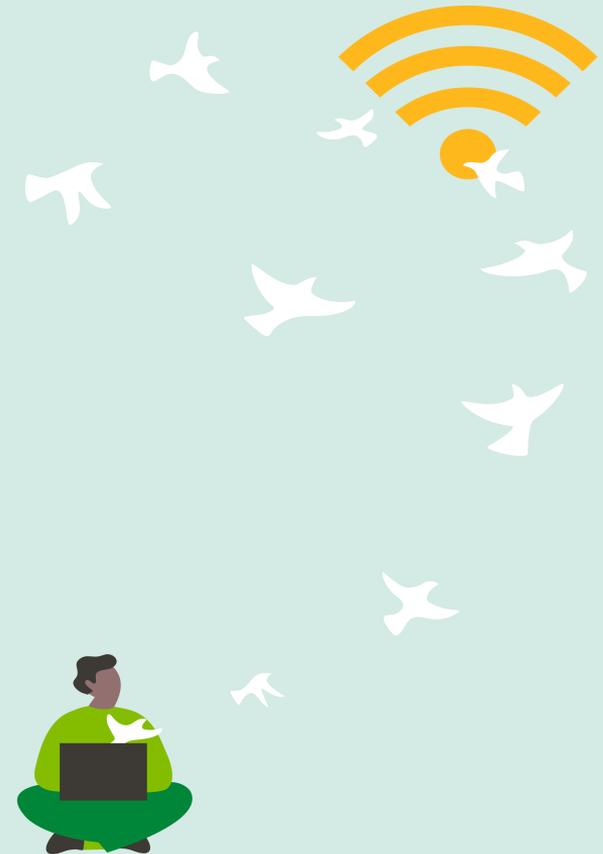


# LifeINmotion: La vita delle cellule in movimento o il movimento della vita

Data: 03.05.2018

Relatore **GIORGIO SCITA**

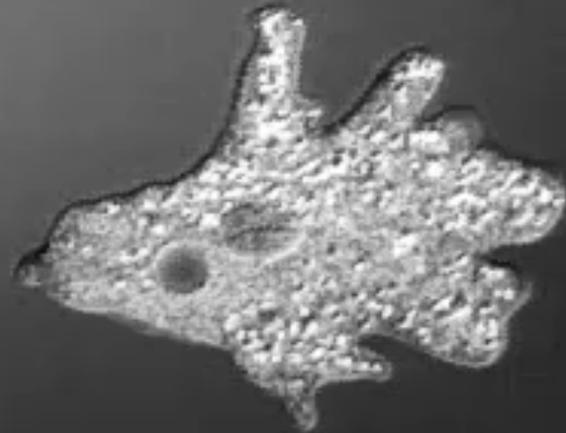


# Migrare....per vivere

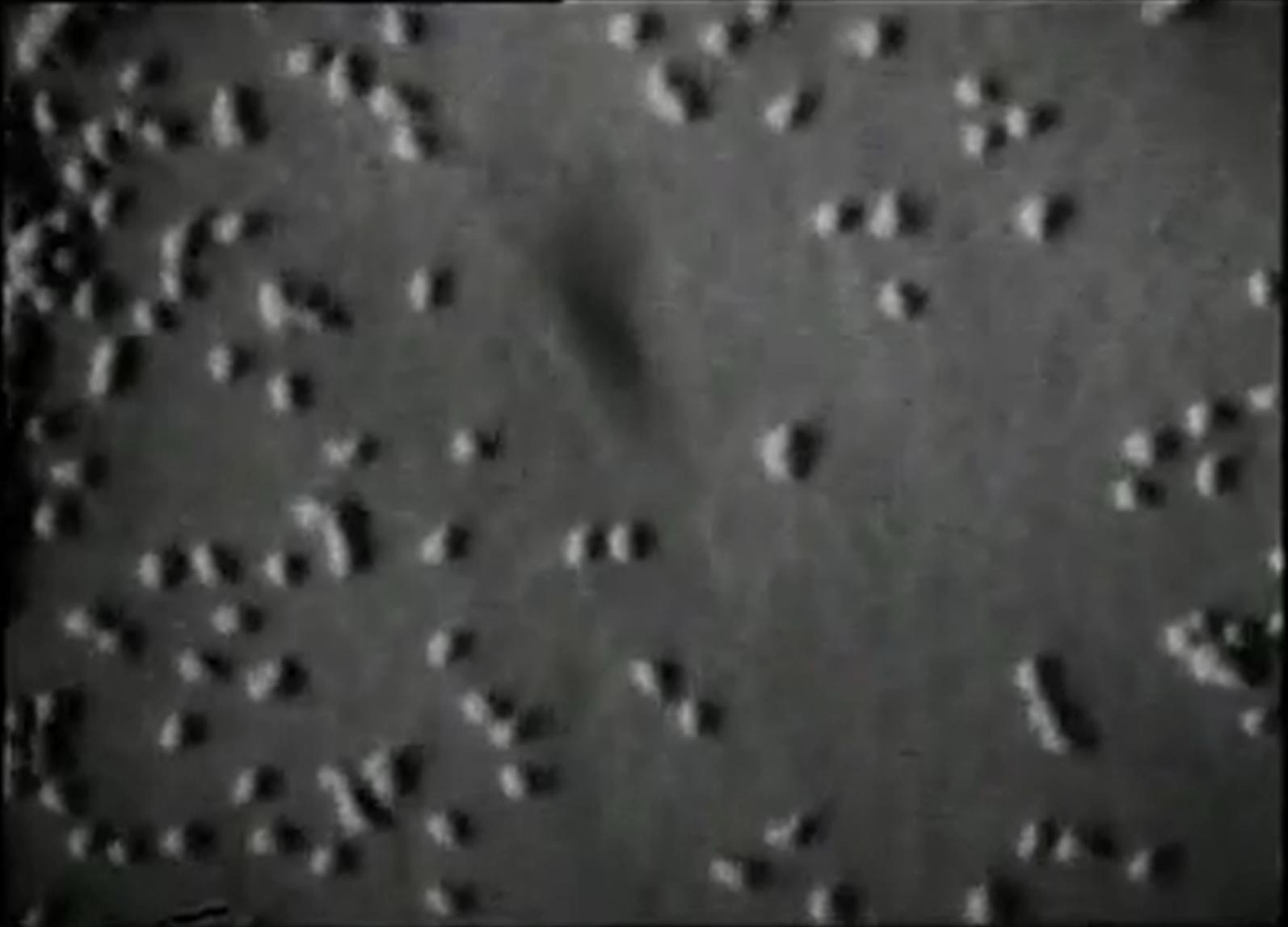
**Batterio: escherichia coli**



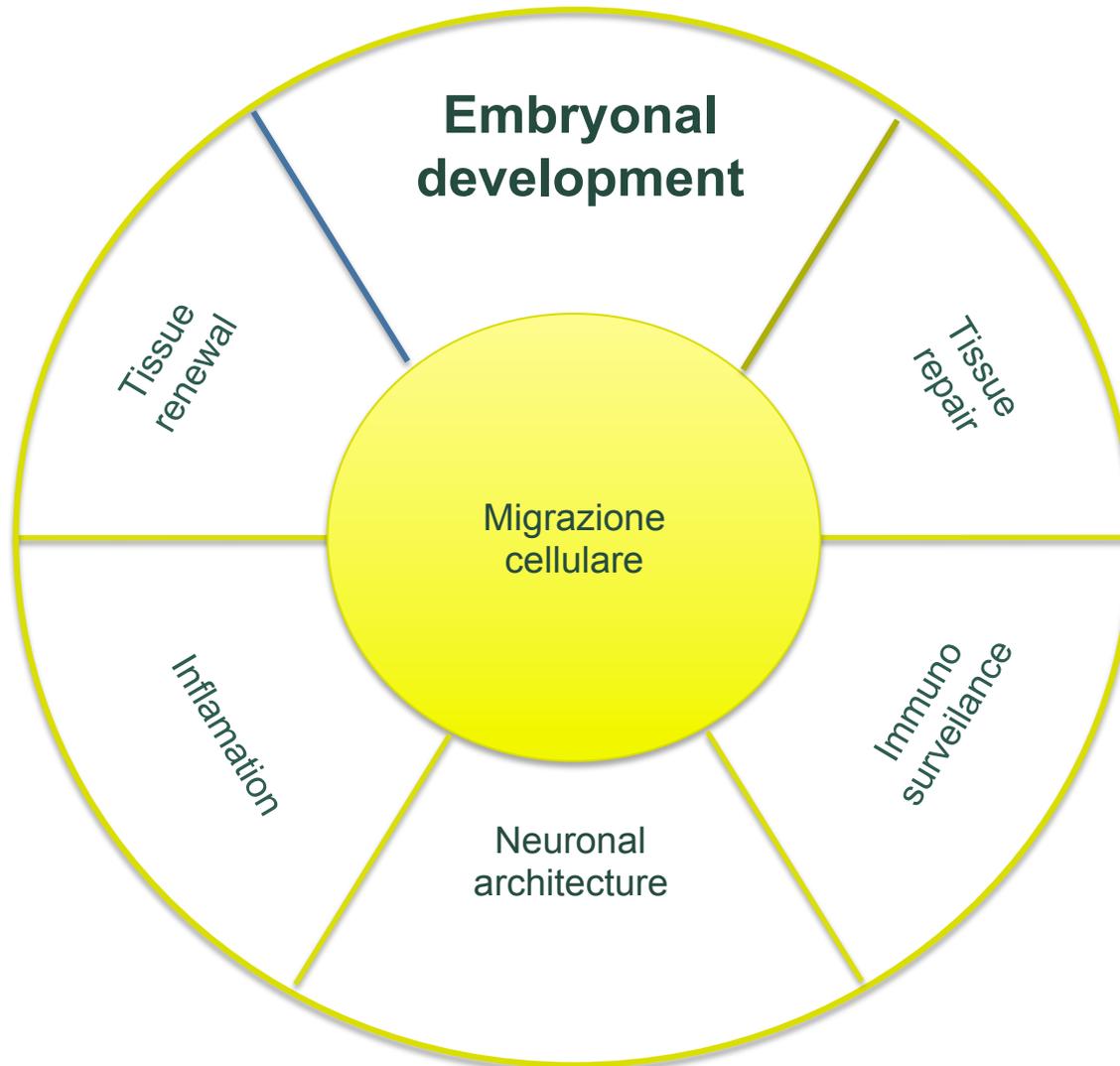
**Un fungo mucilloso**



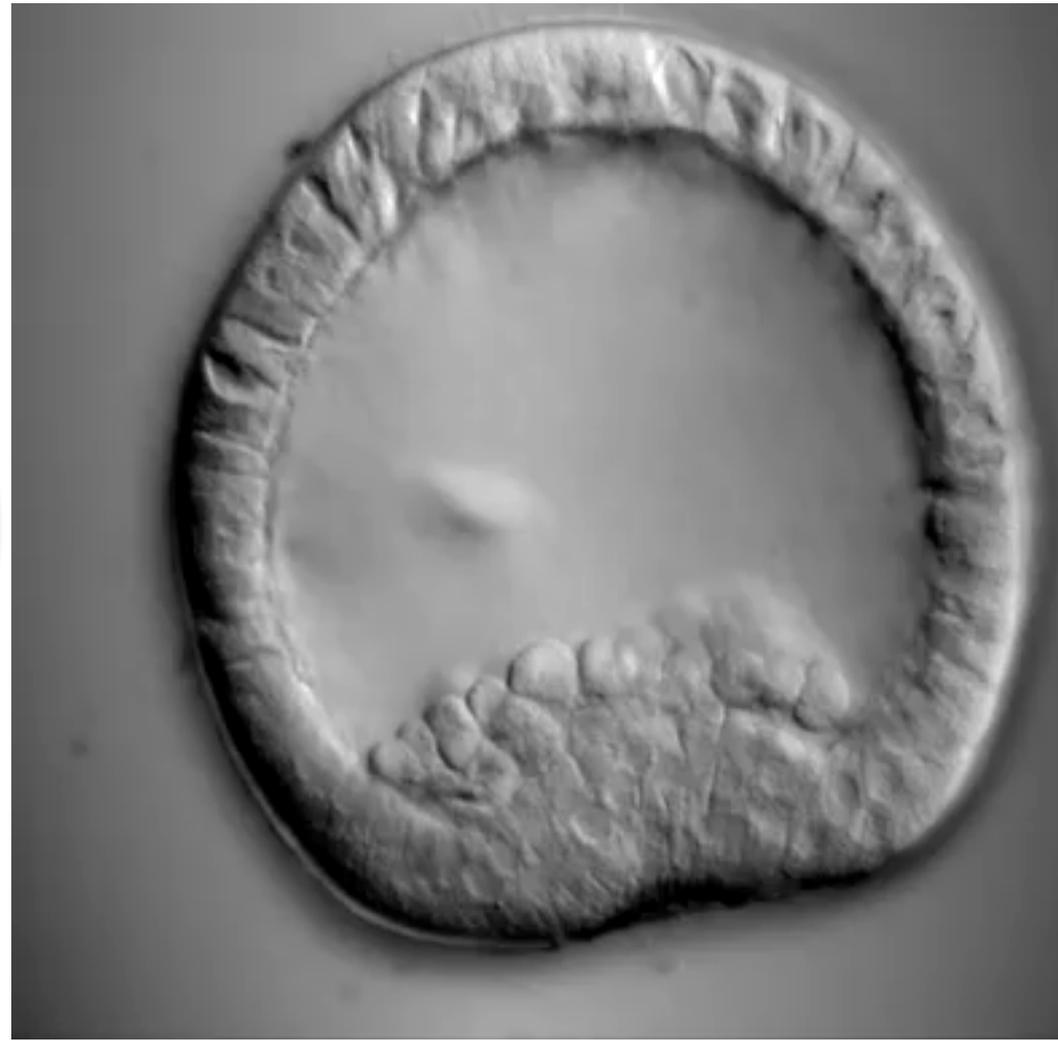
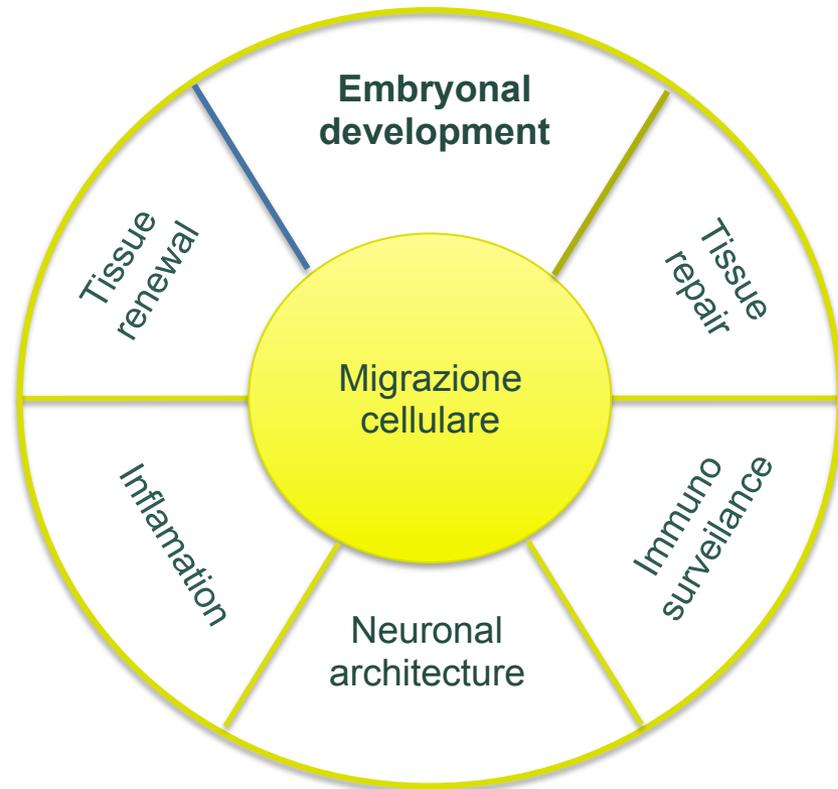
# Migrare....per vivere...e trasformarsi



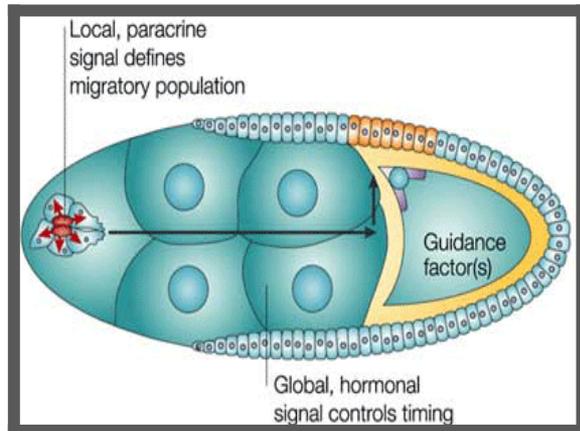
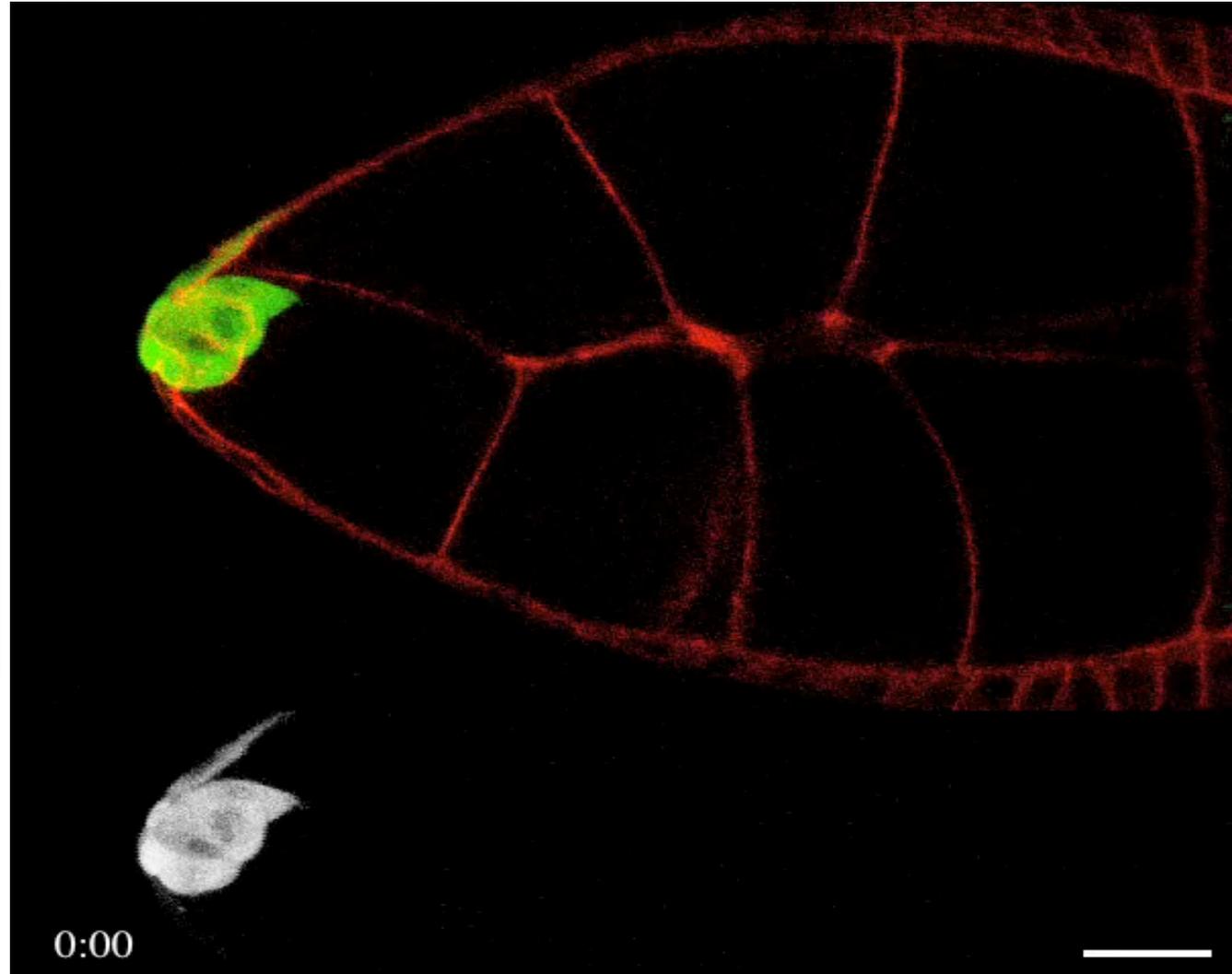
# Migrare....per nascere



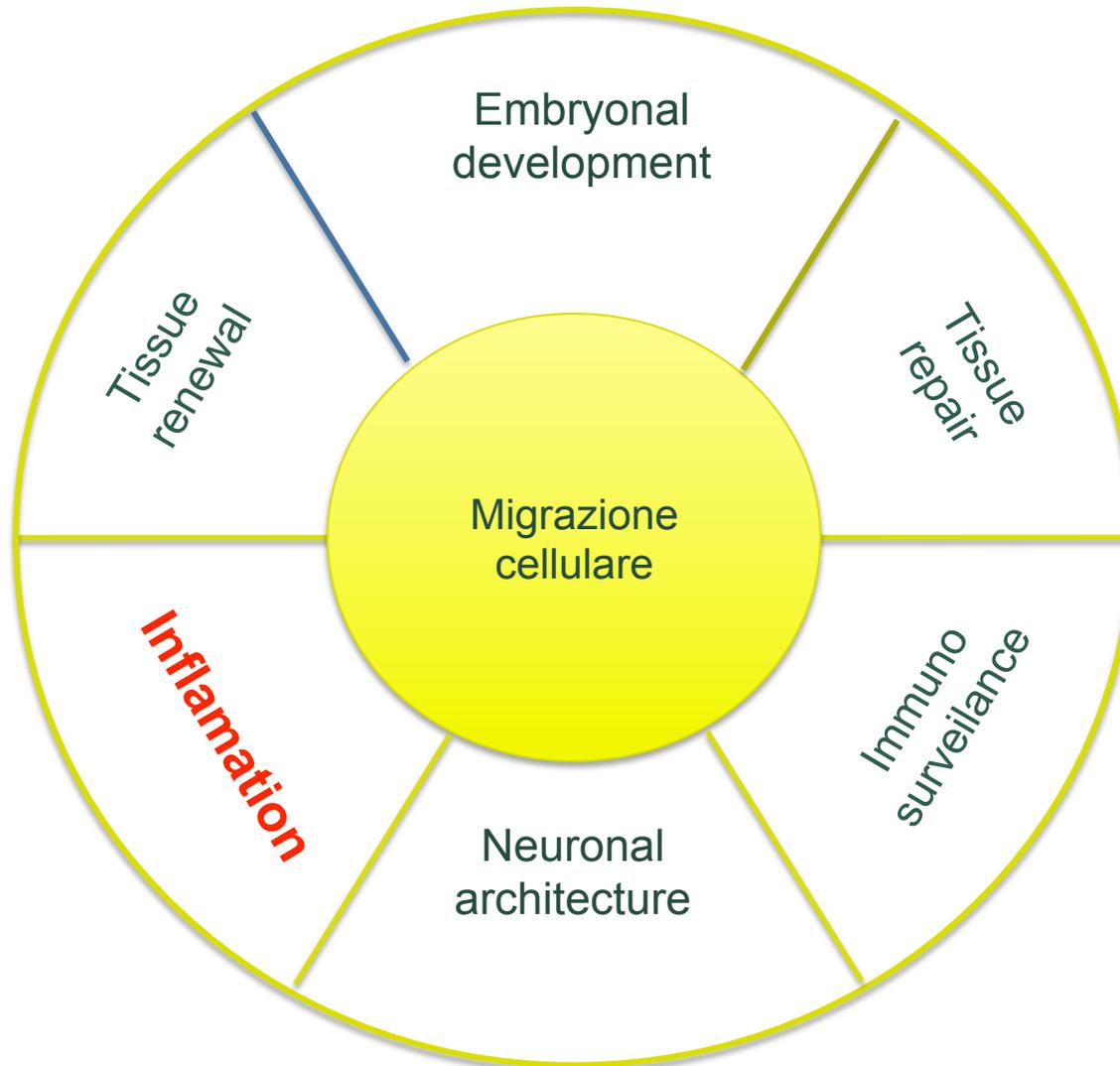
# Migrare... per nascere



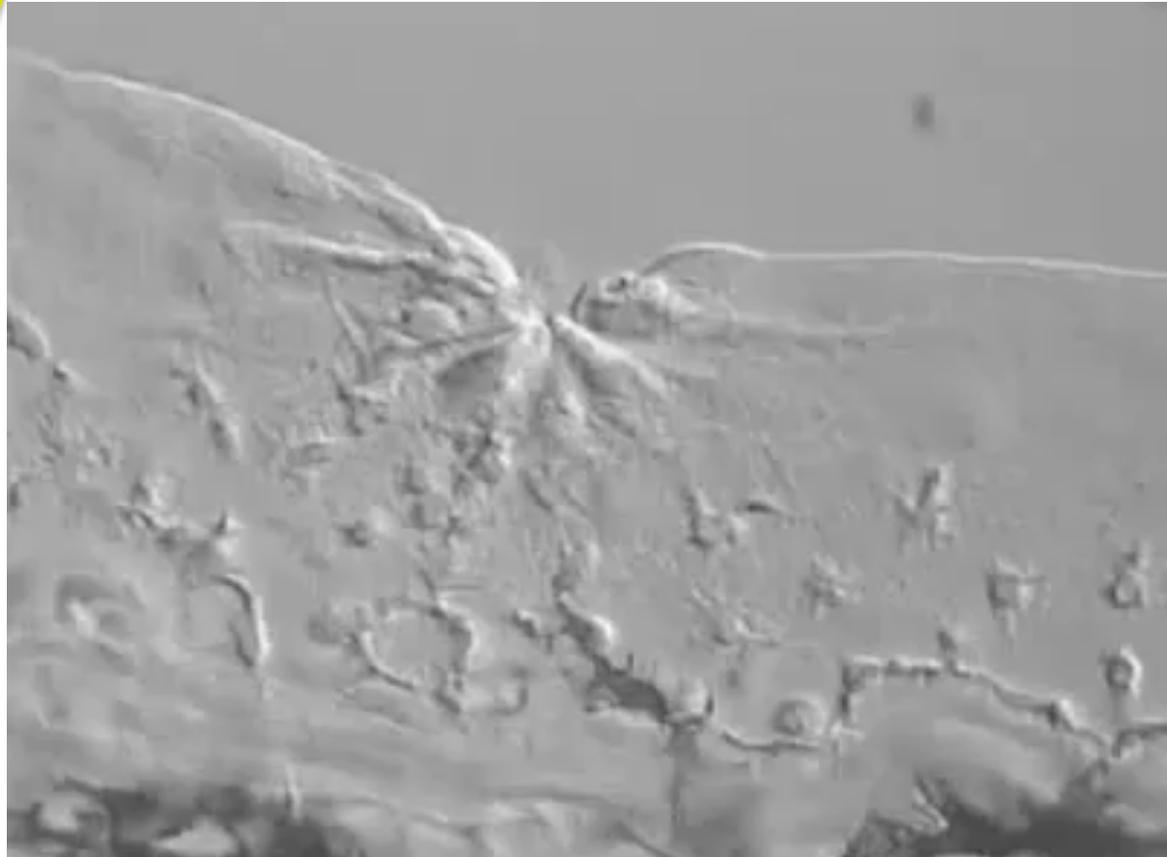
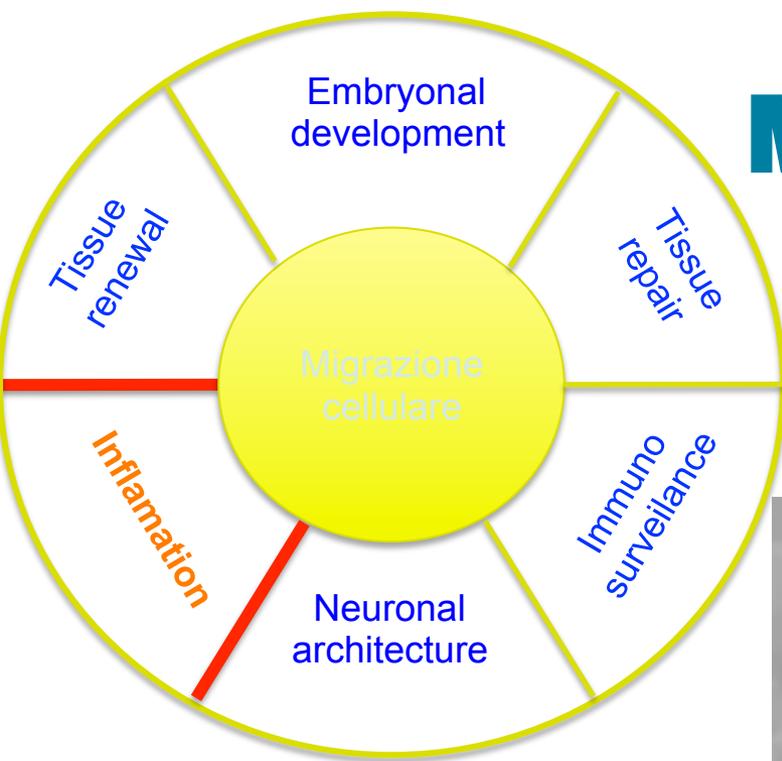
# Migrazione cellulare collettiva



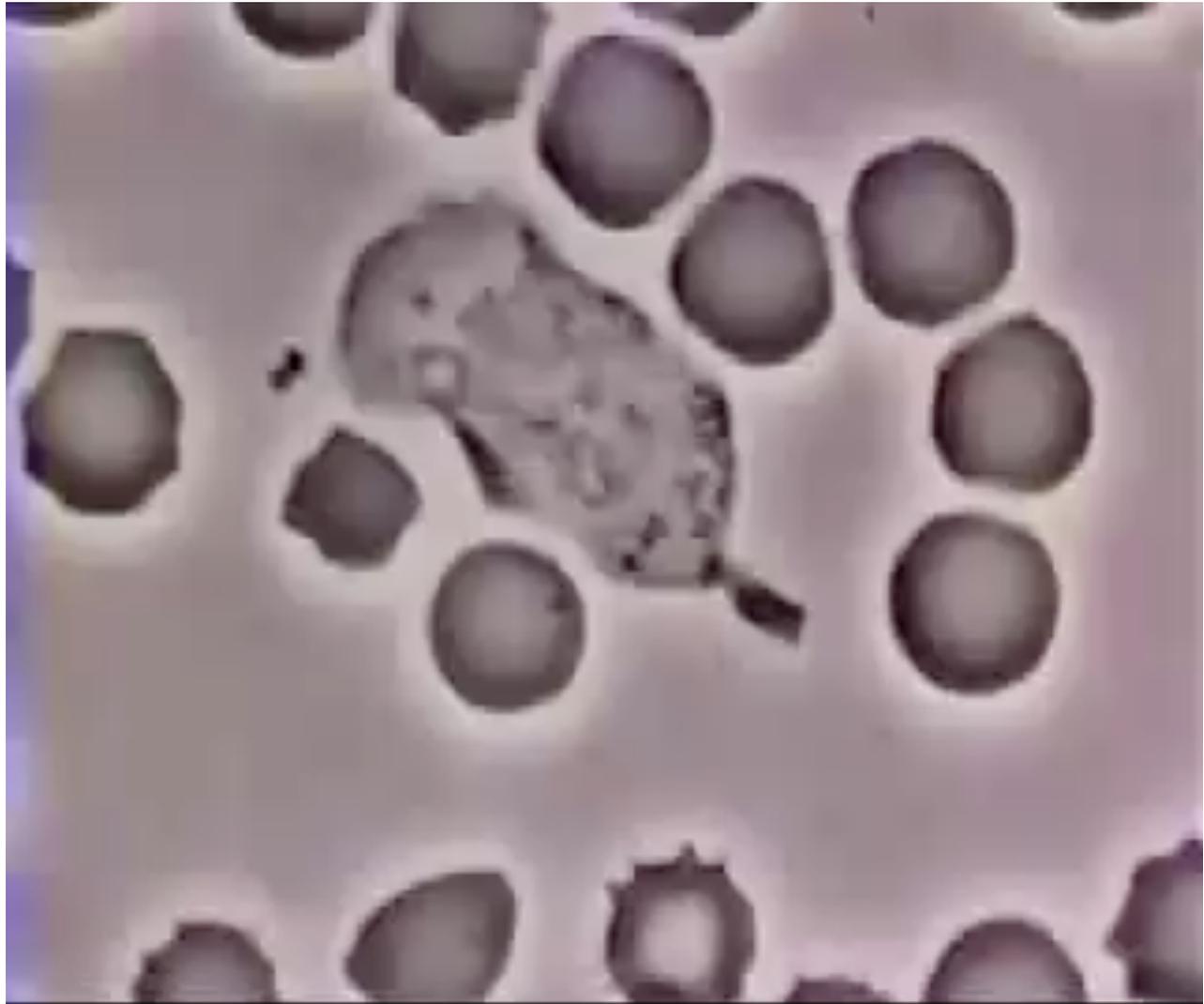
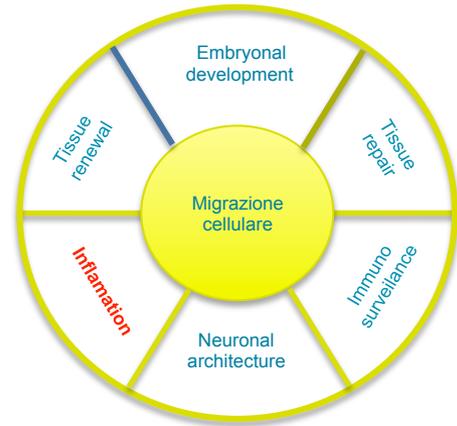
# Migrare... per ri-costruire



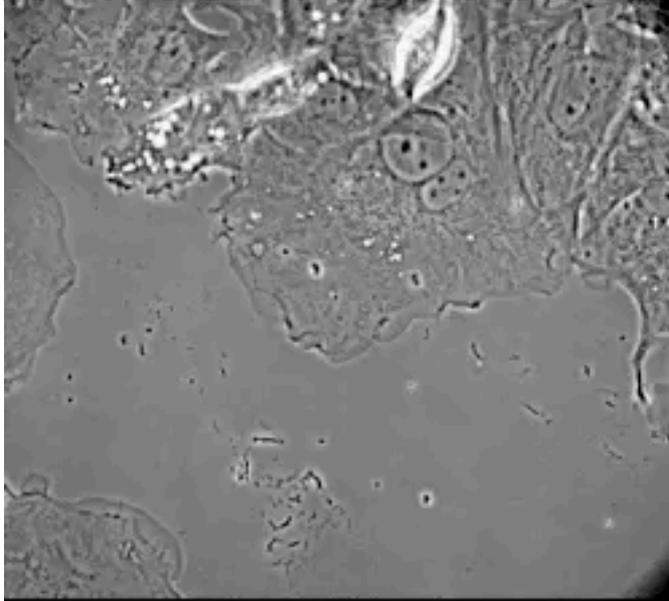
# Migrare....per ri-costruire



# ...Inseguendo la preda



# Sotto forme diverse...



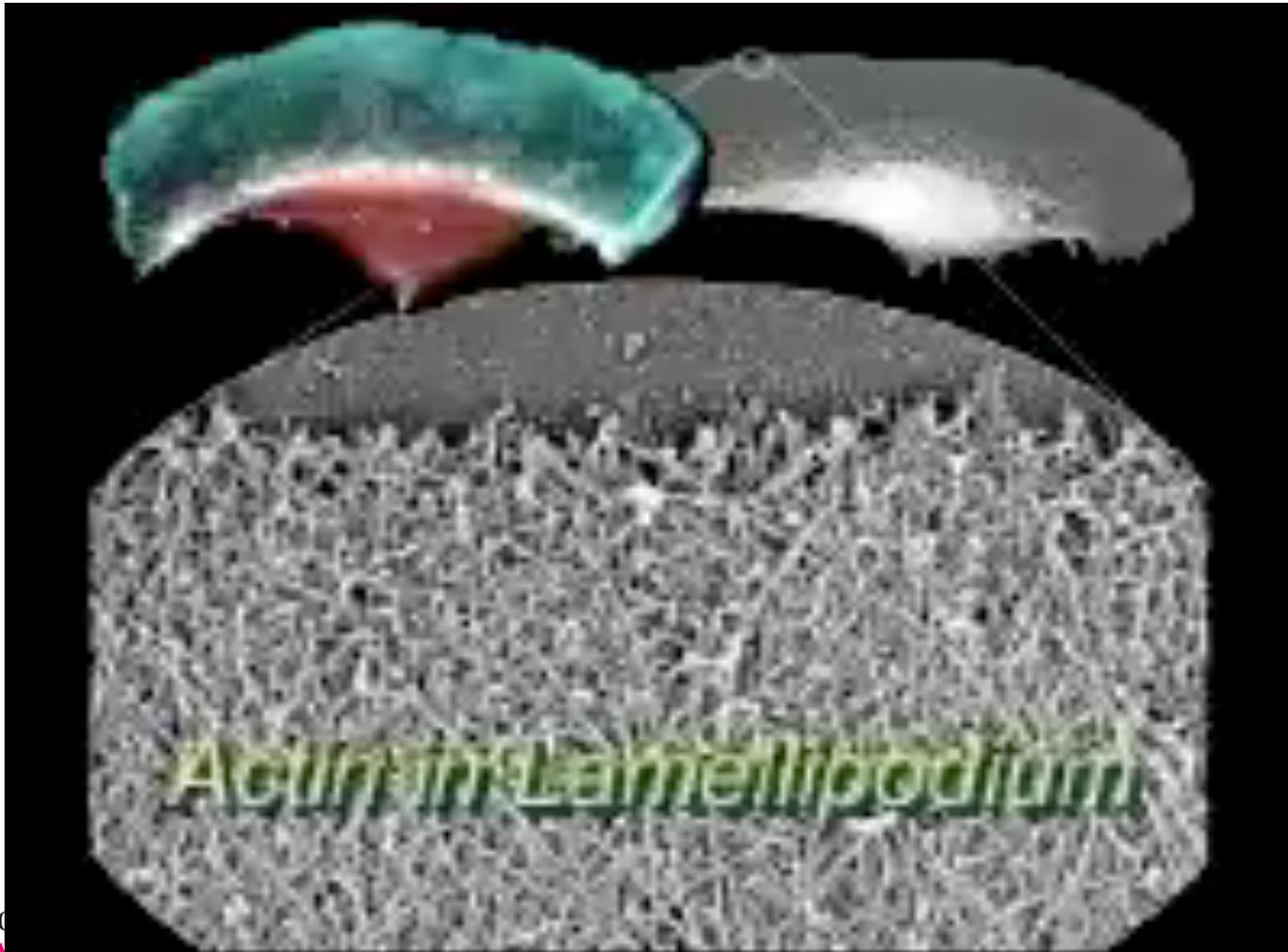
# ...lo stesso motore



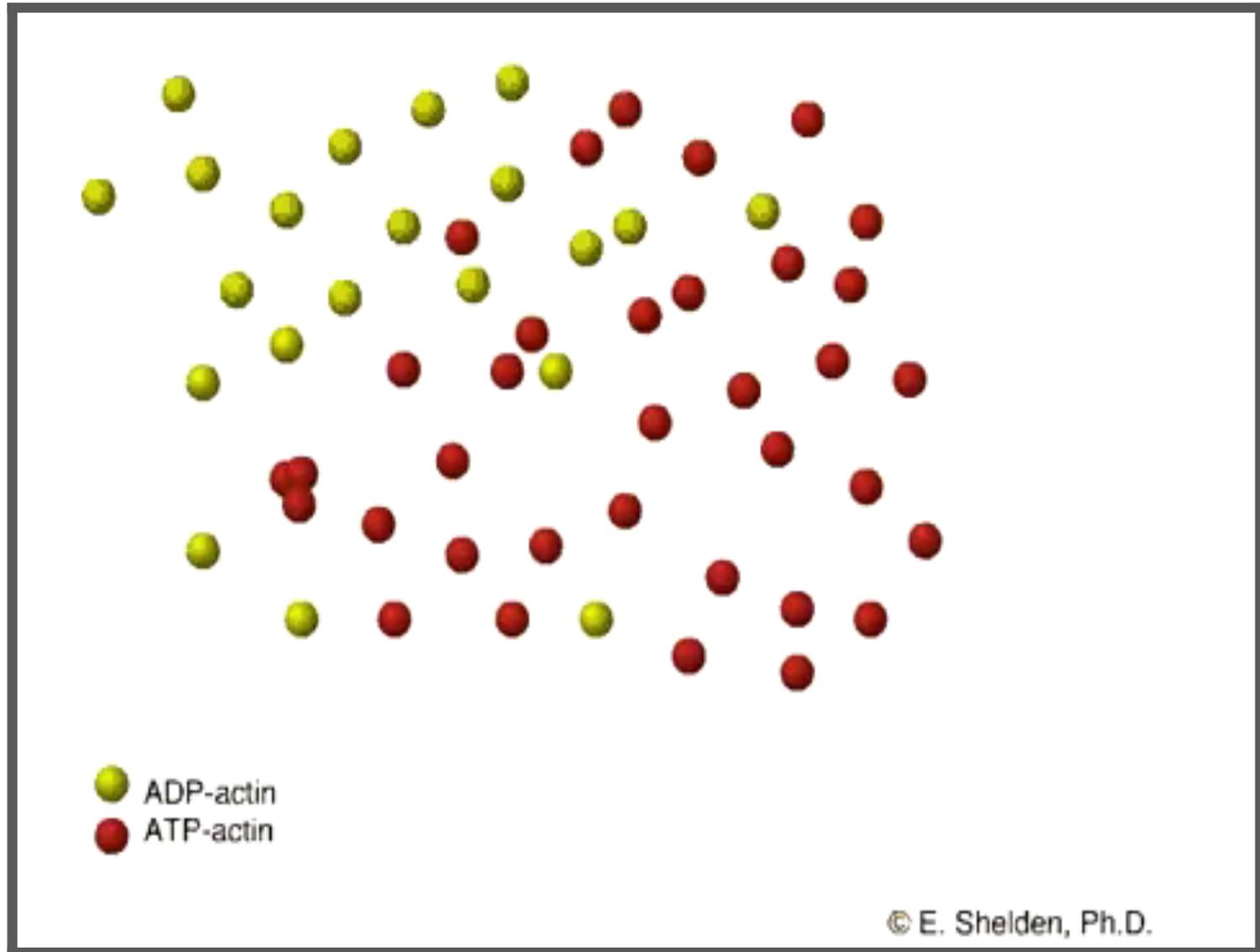
**Ci assembliamo e disassembliamo...**

**Ci assembliamo e disassembliamo...**

**Ci assembliamo e disassembliamo...**



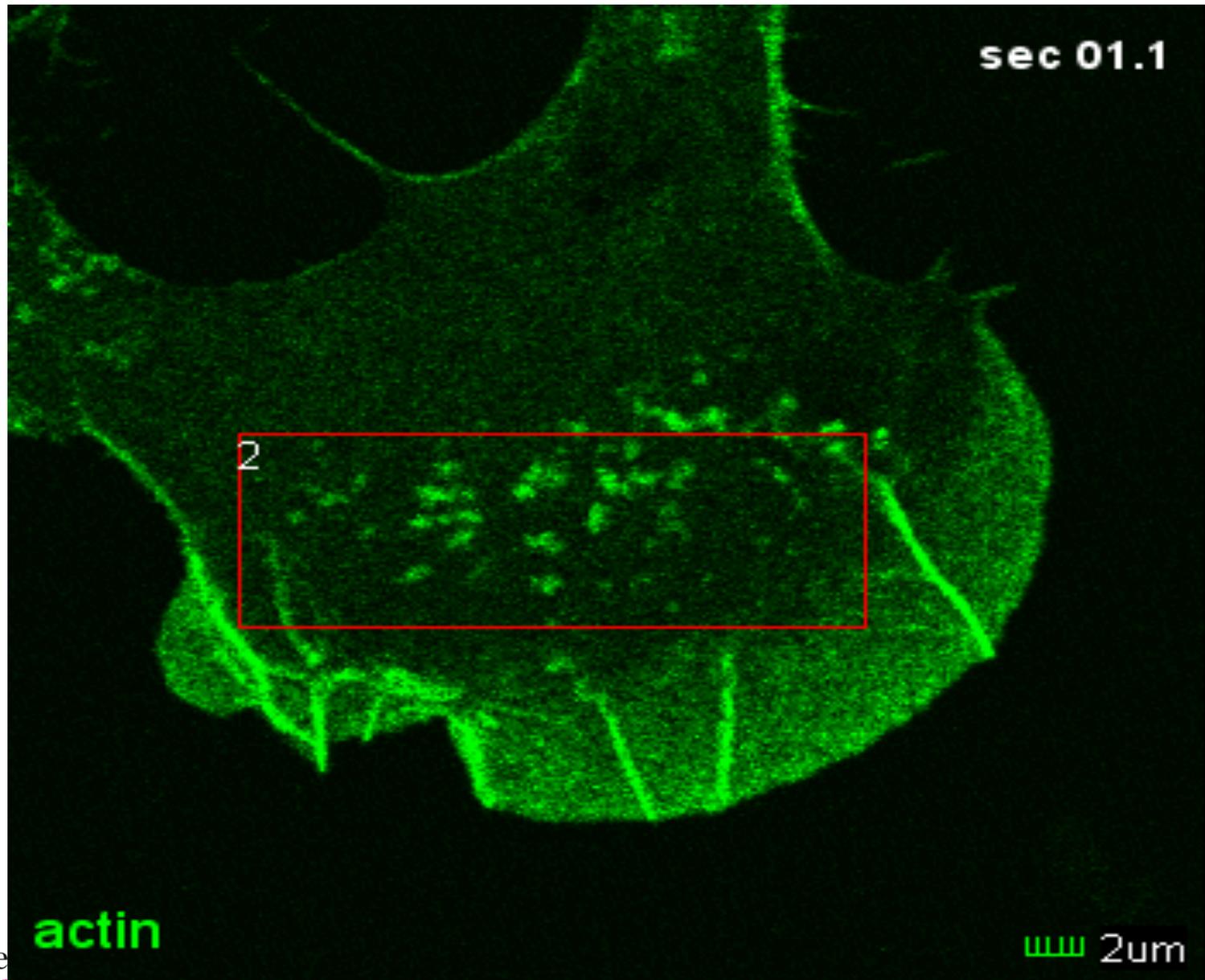
# Il tapis roulant del movimento



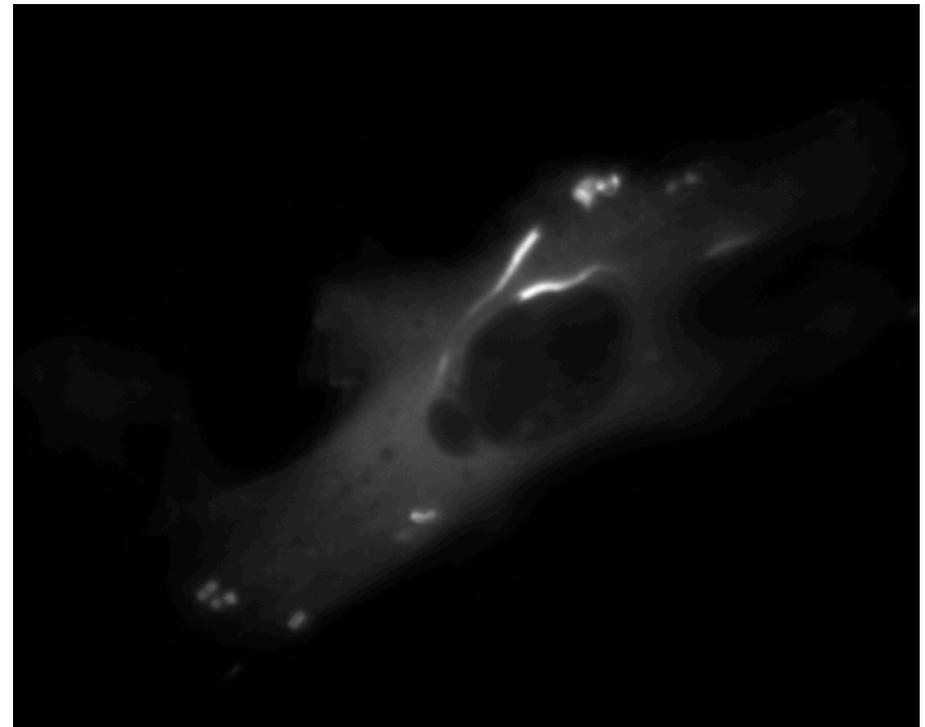
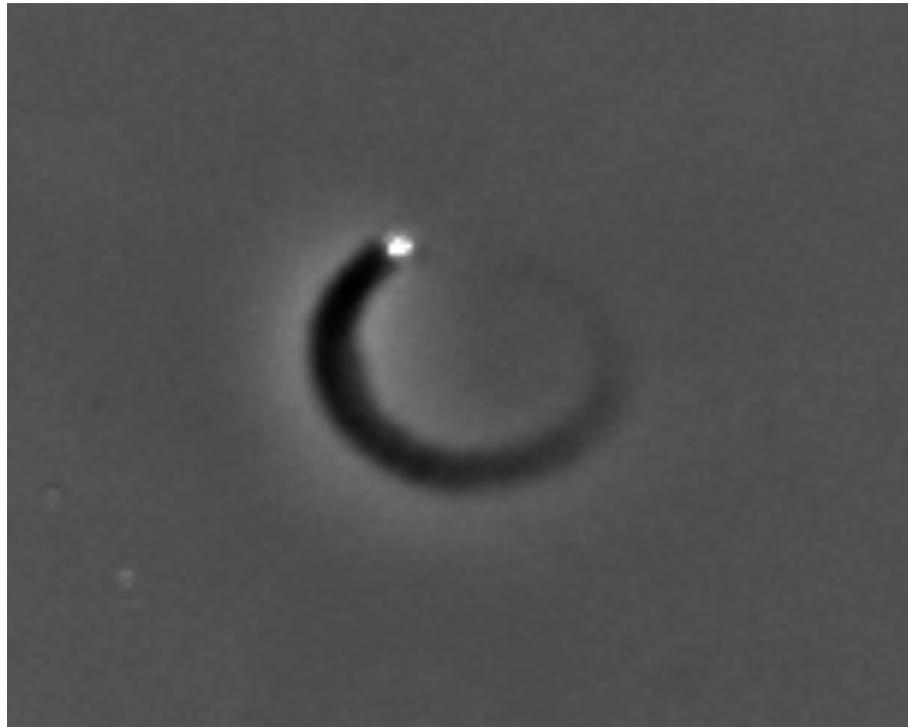
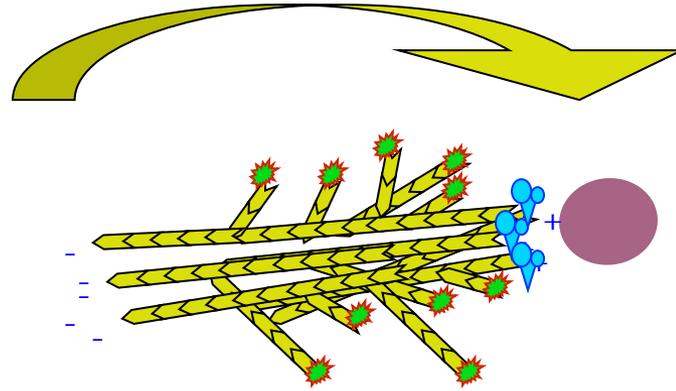


ARTIE.COM

# Sbiadire per visualizzare



# Riproduciamo un razzo



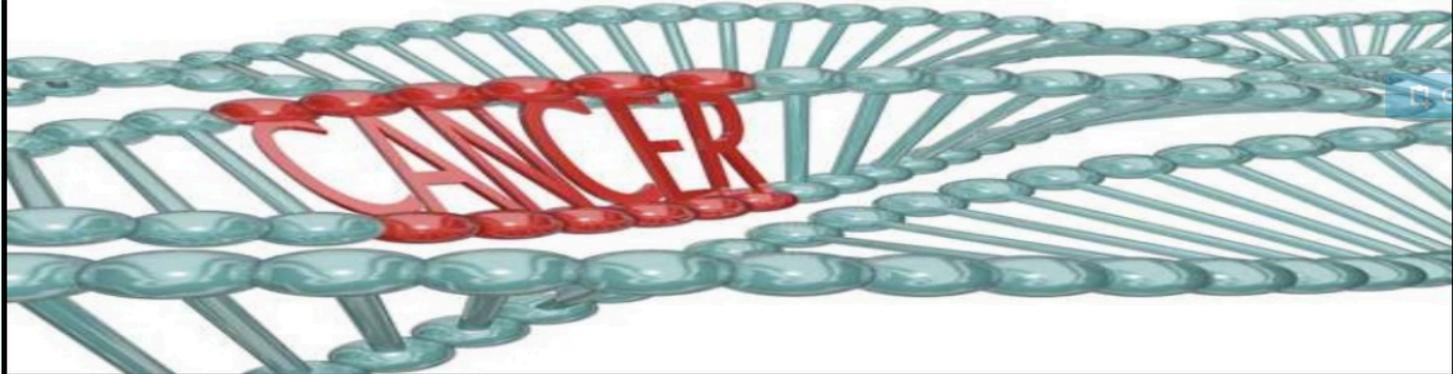
# Migrazione e Cancro

# Che cosa è il cancro?

## Concetti importanti

- Le cellule cancerose derivano da cellule normali del nostro organismo
- Le cellule cancerose acquisiscono alcune proprietà che le rendono diverse dalle cellule normali
- Ci sono molti modi di generare una cellula cancerosa
- Esistono molteplici “ostacoli” messi in atto dal nostro organismo che impediscono lo sviluppo di una cellula tumorale. Questi meccanismi regolativi sono intrinseci e funzionali al mantenimento dell’omeostasi dei nostri tessuti e cellule, e frequentemente si “accendono” proprio come conseguenza della attività deregolate proprie dei tumori

# Il cancro è una malattia genetica

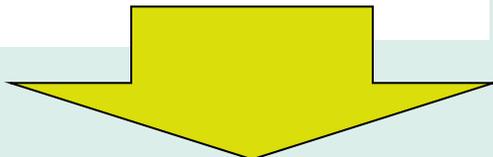
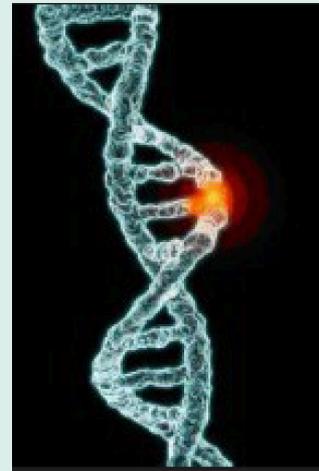
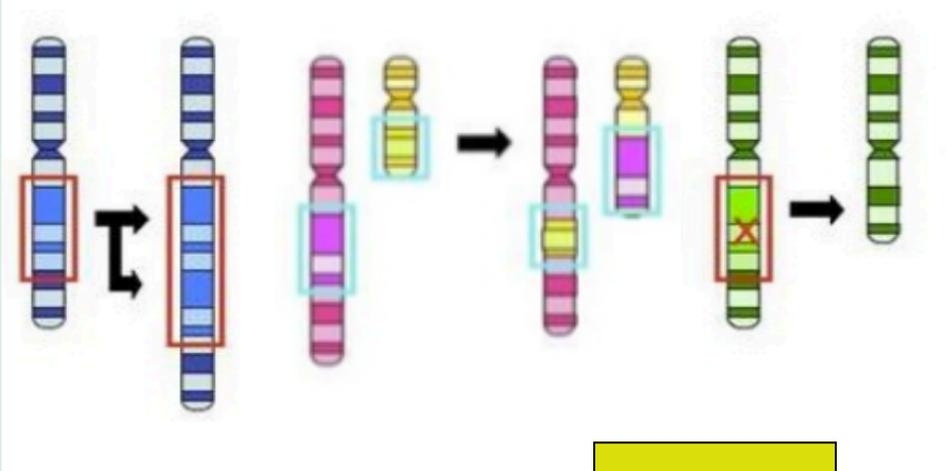


Duplicazioni

Traslocazioni

Delezioni

Mutazioni di una sola base



Oncogeni geni  
Soppressori di Tumori

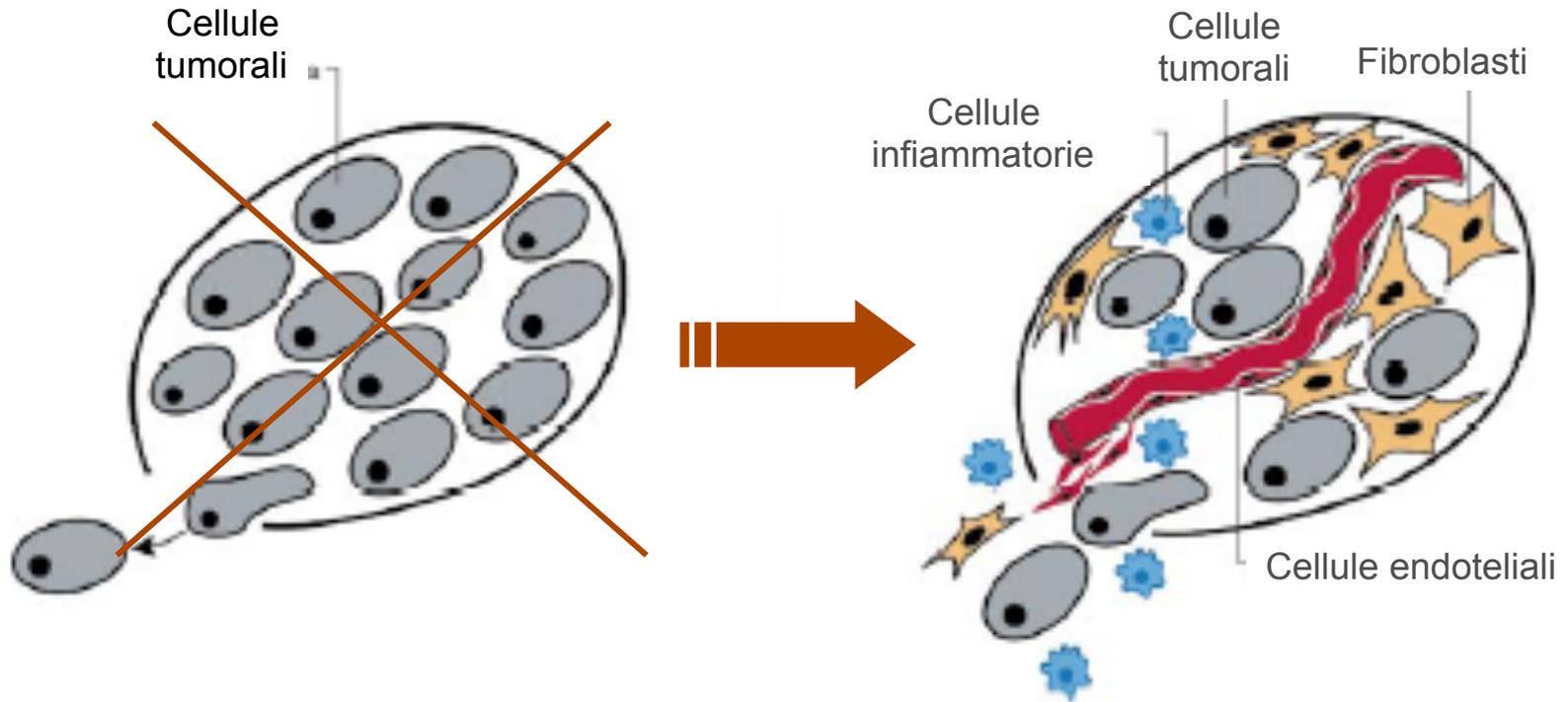
Perdita di attività di prodotti di geni che, in condizioni normali, riparerebbero danni del DNA



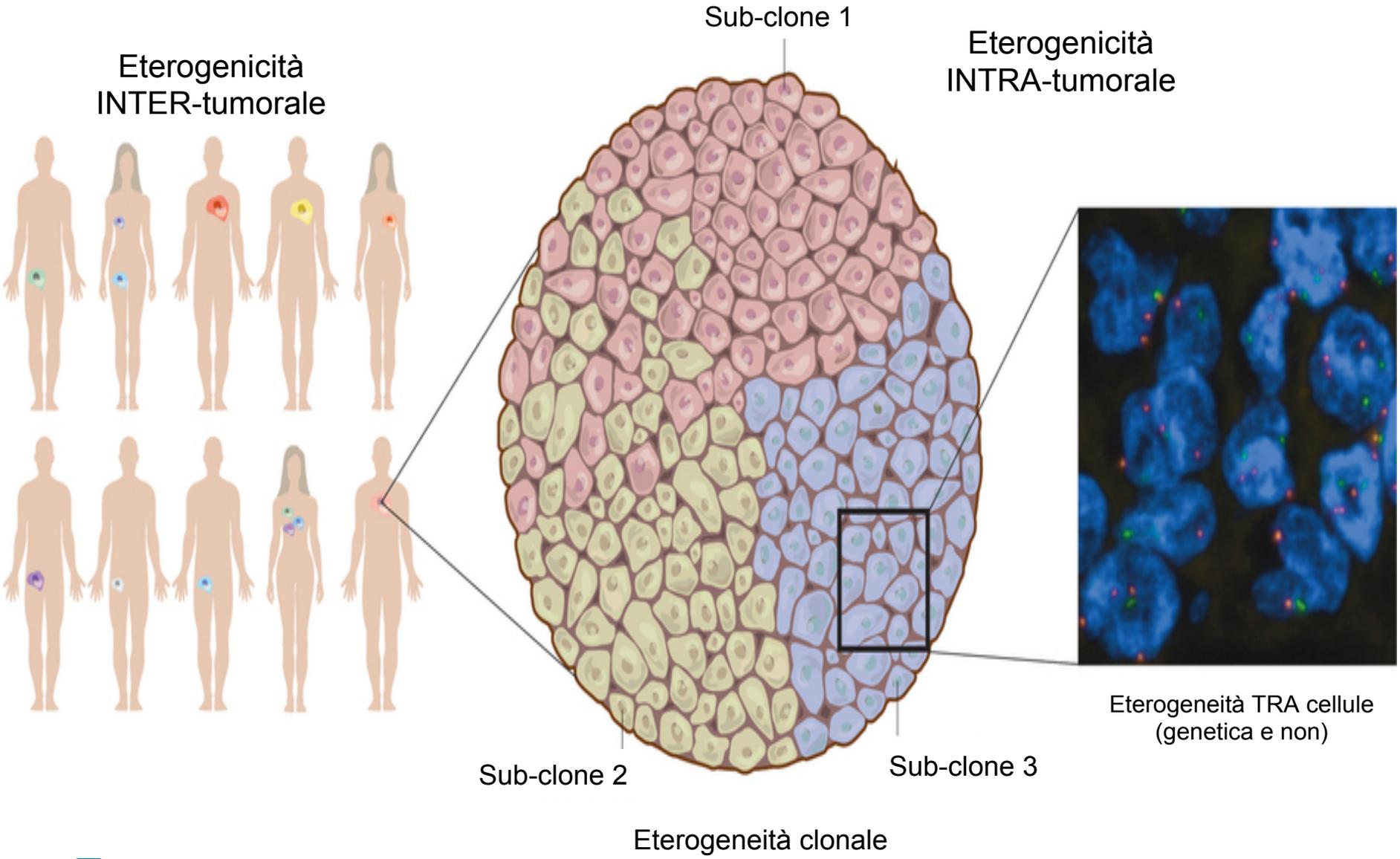
328

Geni che se mutati causano il cancro

# I tumori sono tessuti complessi



# I tumori sono tessuti complessi



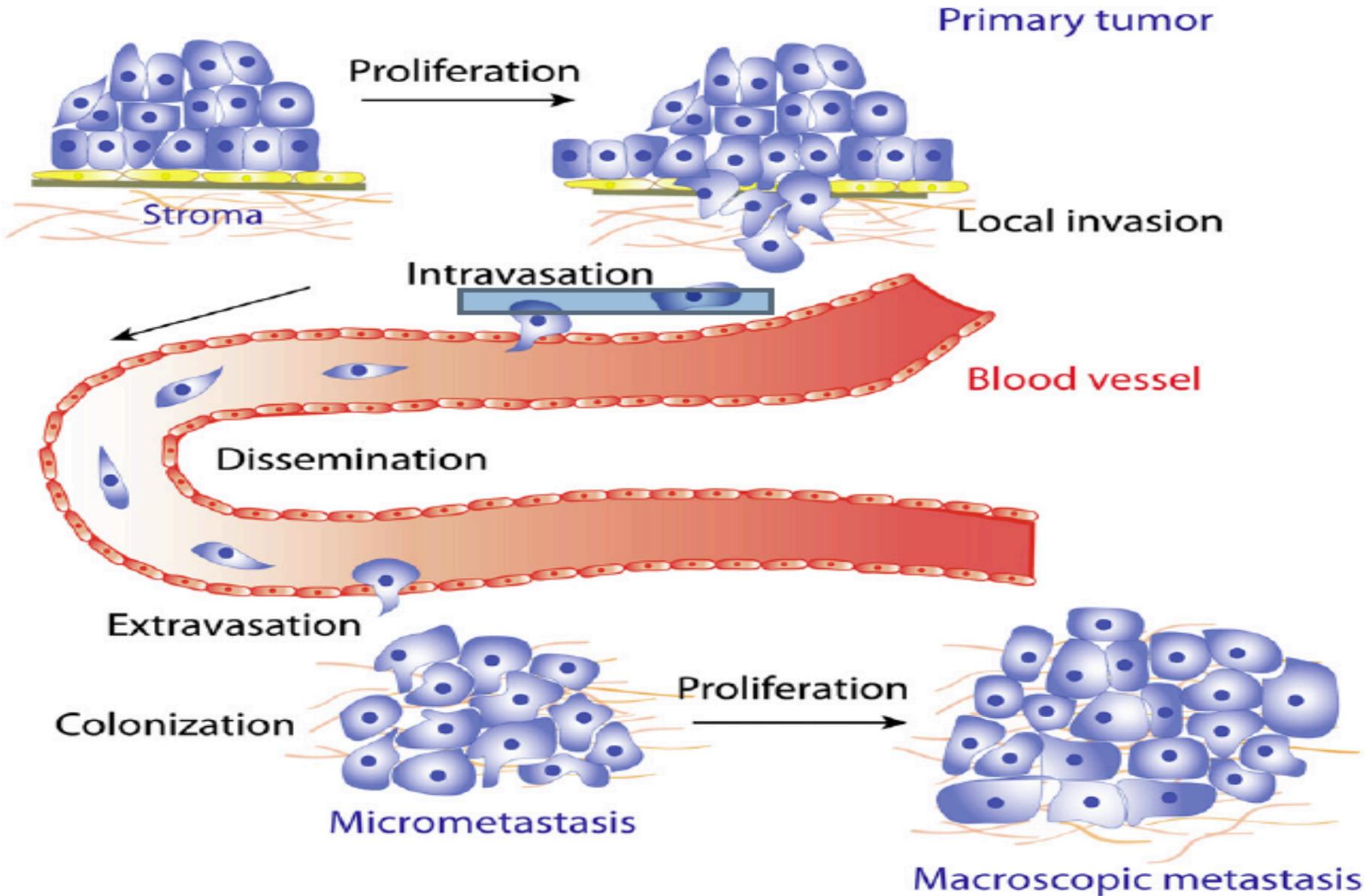
# I caratteri distintivi del cancro



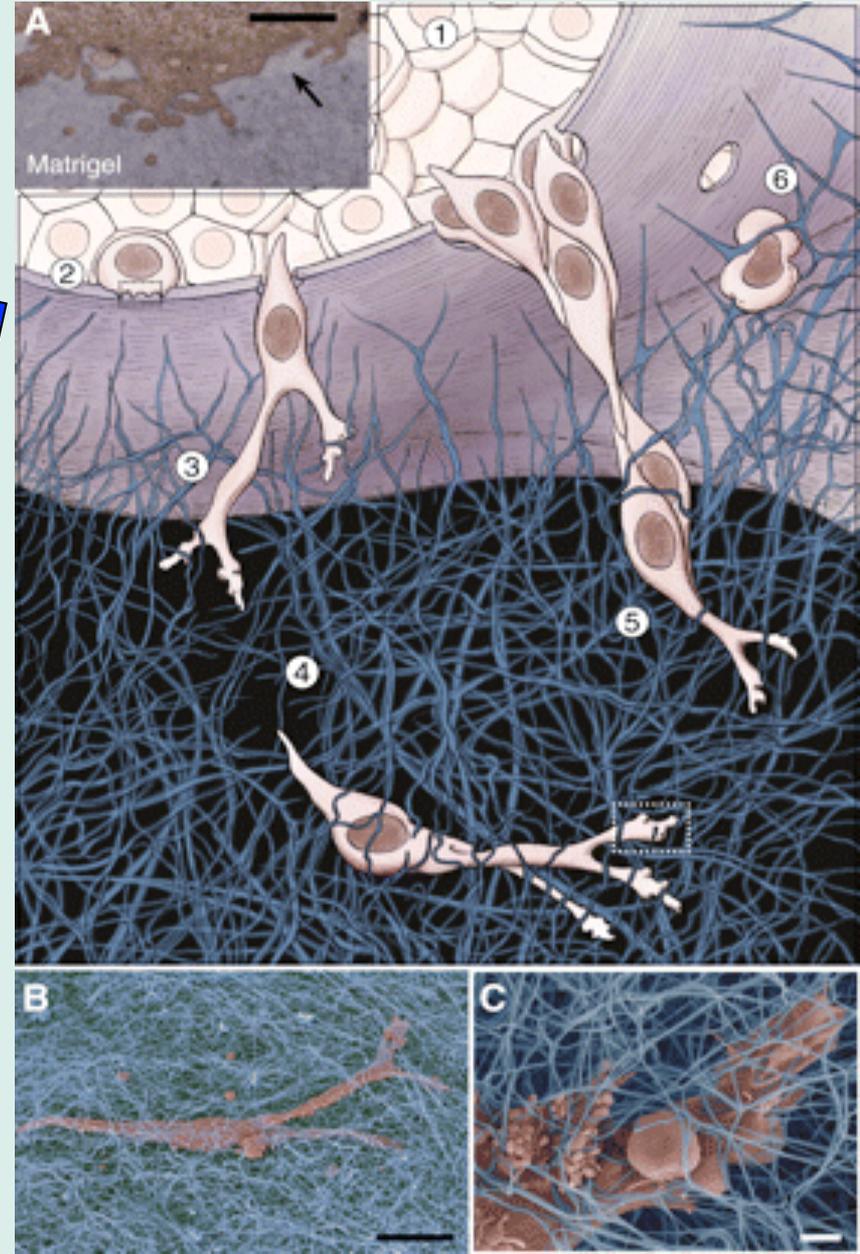
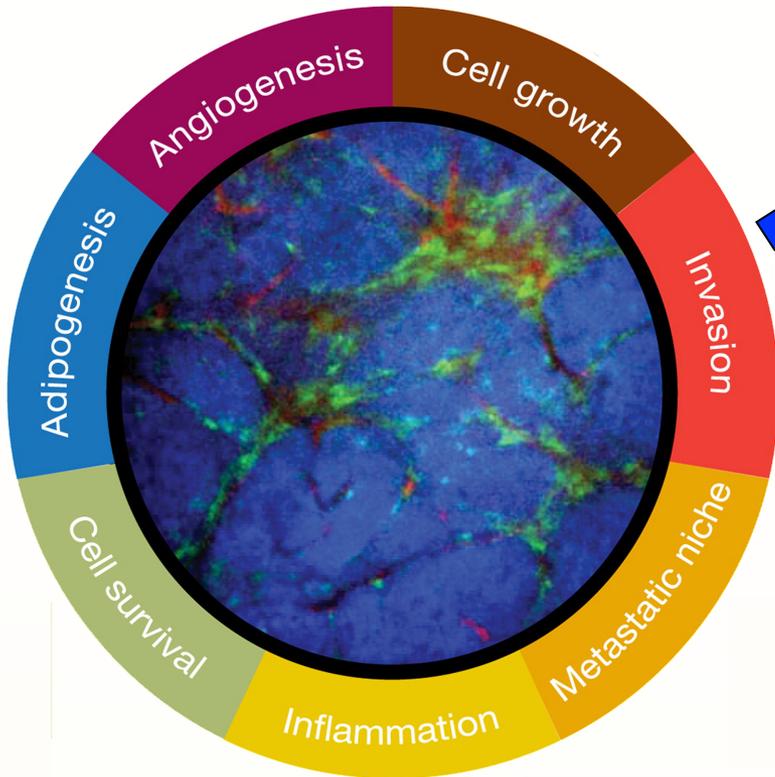
# I caratteri distintivi del cancro



# Una corsa in autostrada

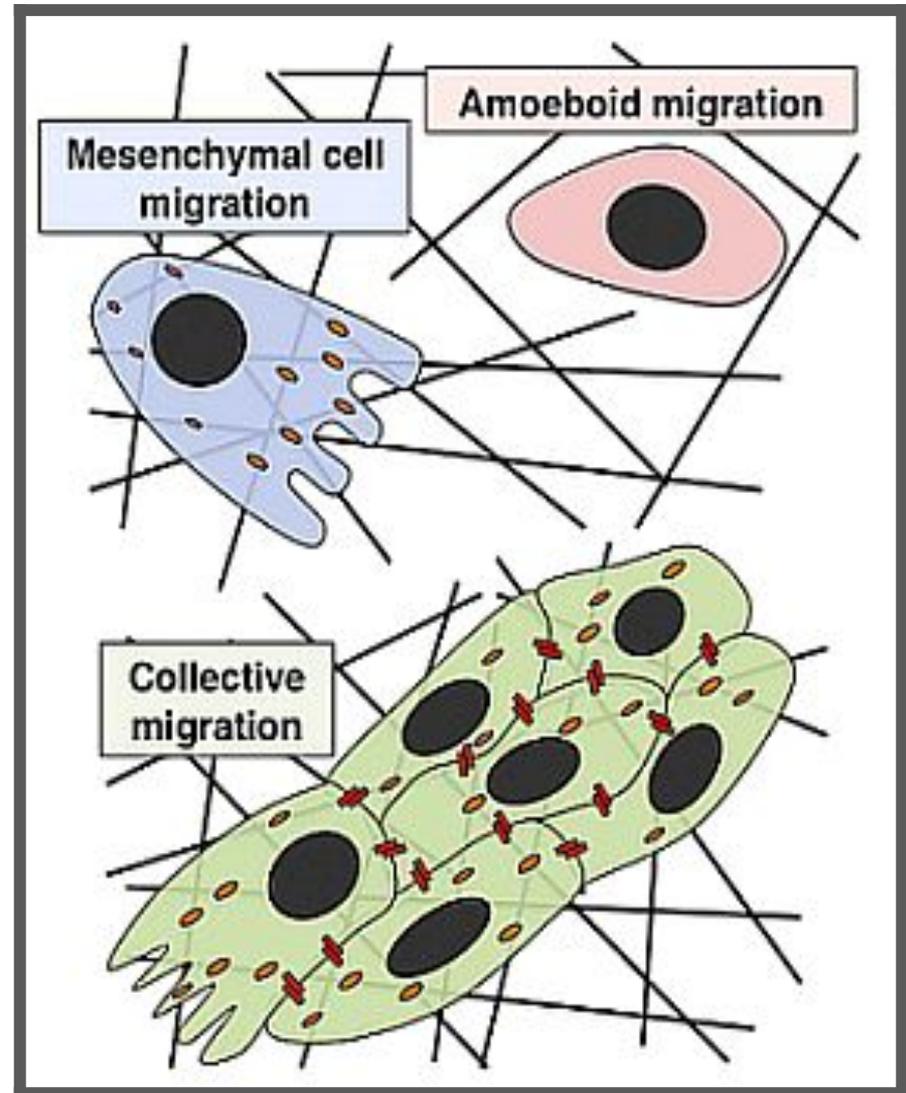
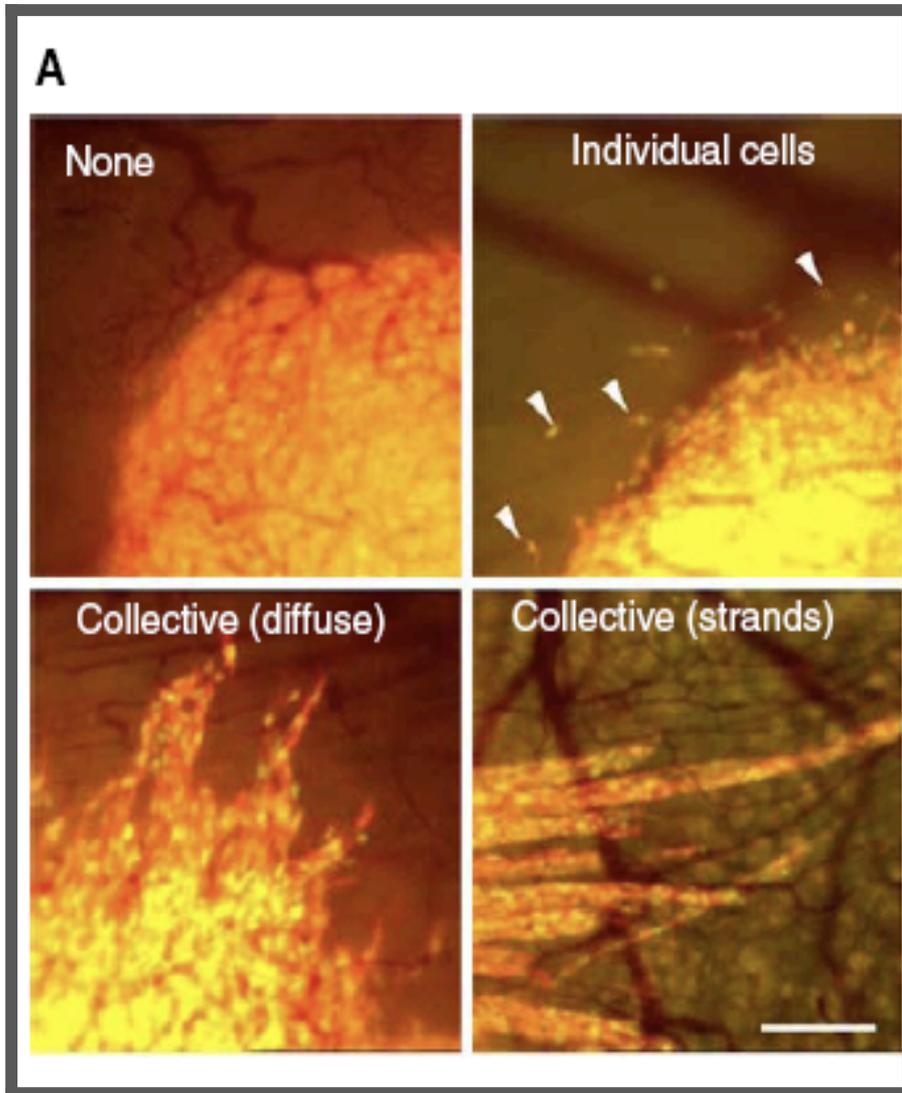


# Scorciatoie di ingresso

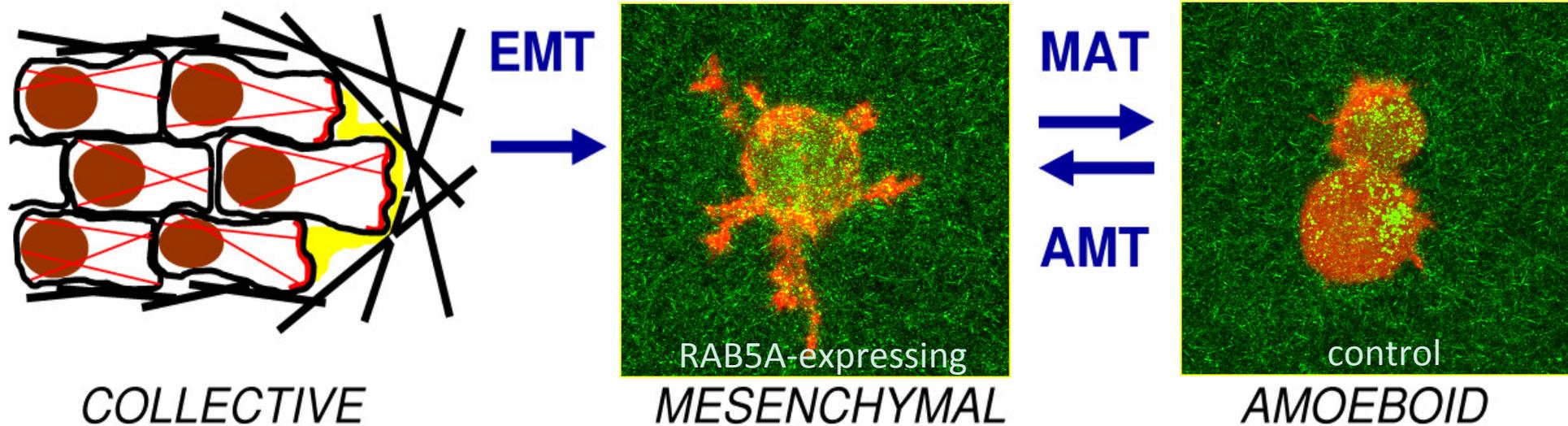


Poincloux R, Lizárraga F, Chavrier P. J Cell Sci. 2009 Sep 1;122(Pt 17): 3015-24.

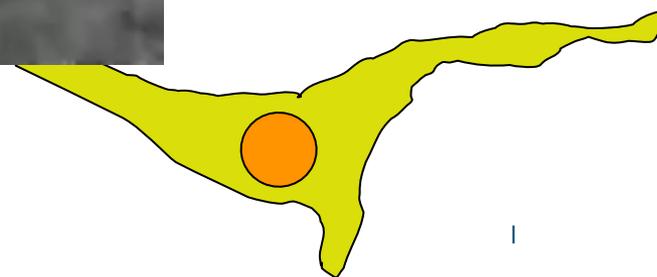
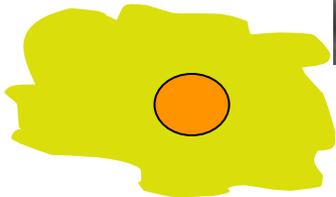
# Strategie di invasione

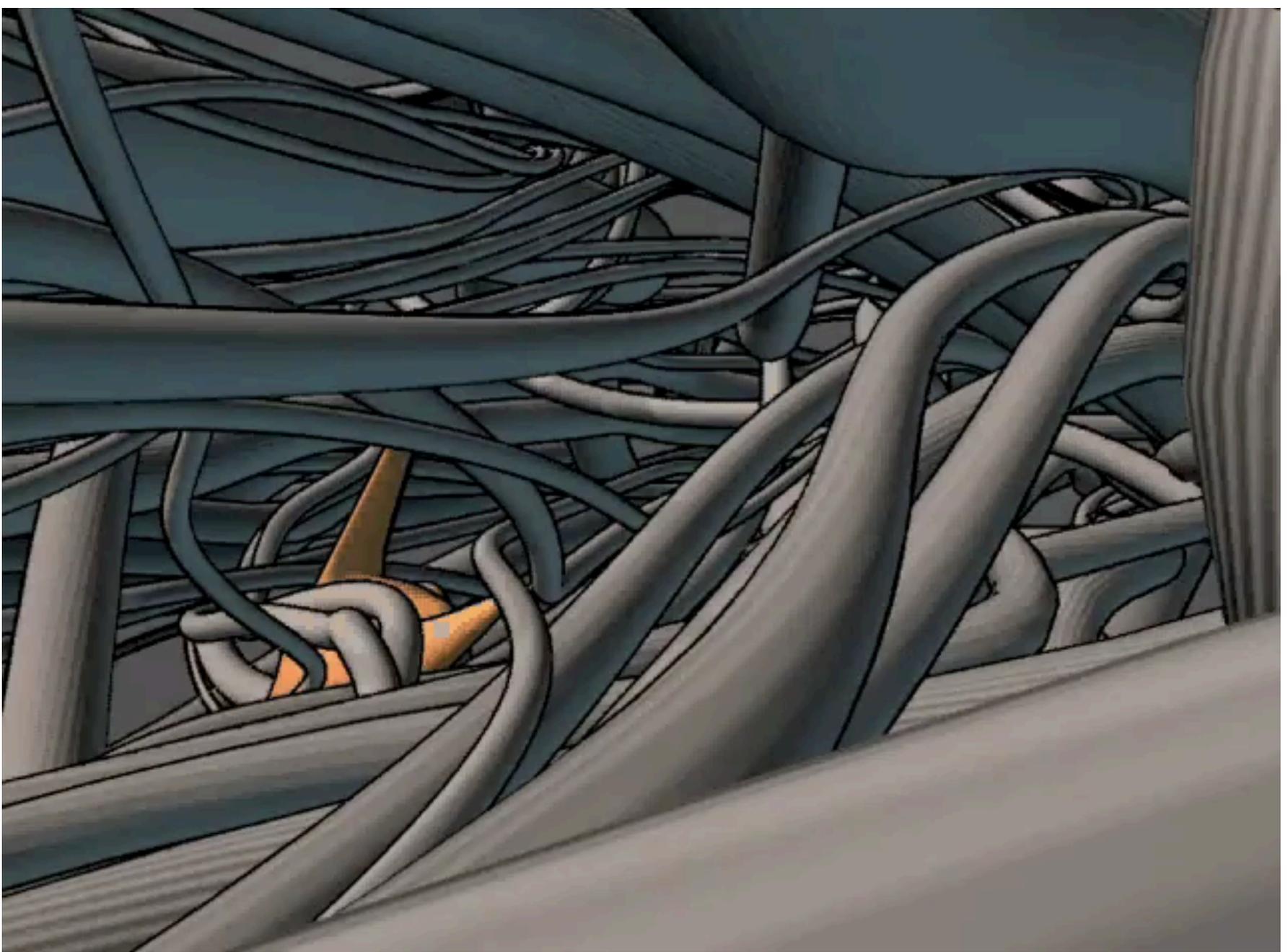


# Plasticità e flessibilità nella migrazione delle cellule cancerose.

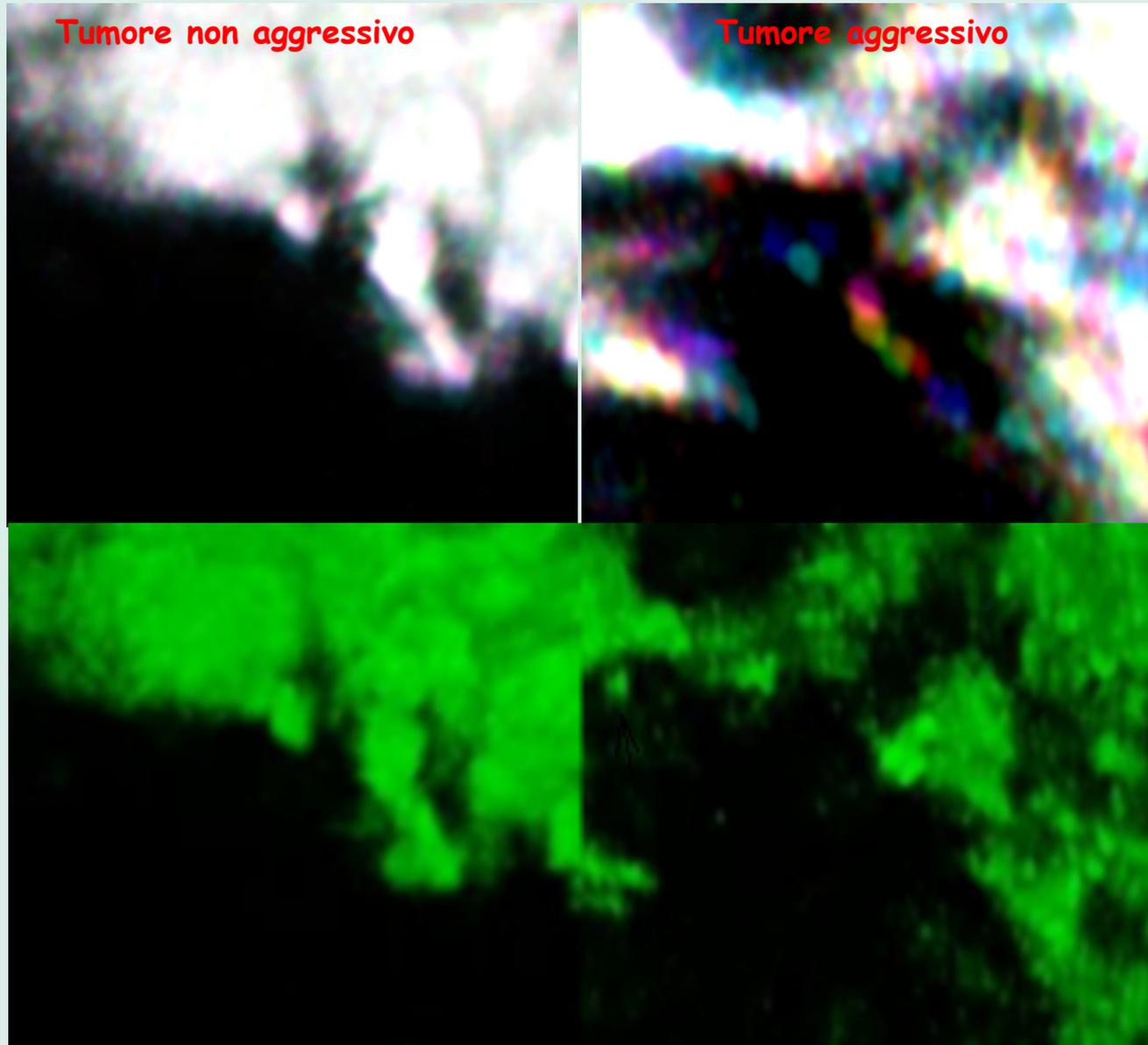


# La plasticità della migrazione in diretta

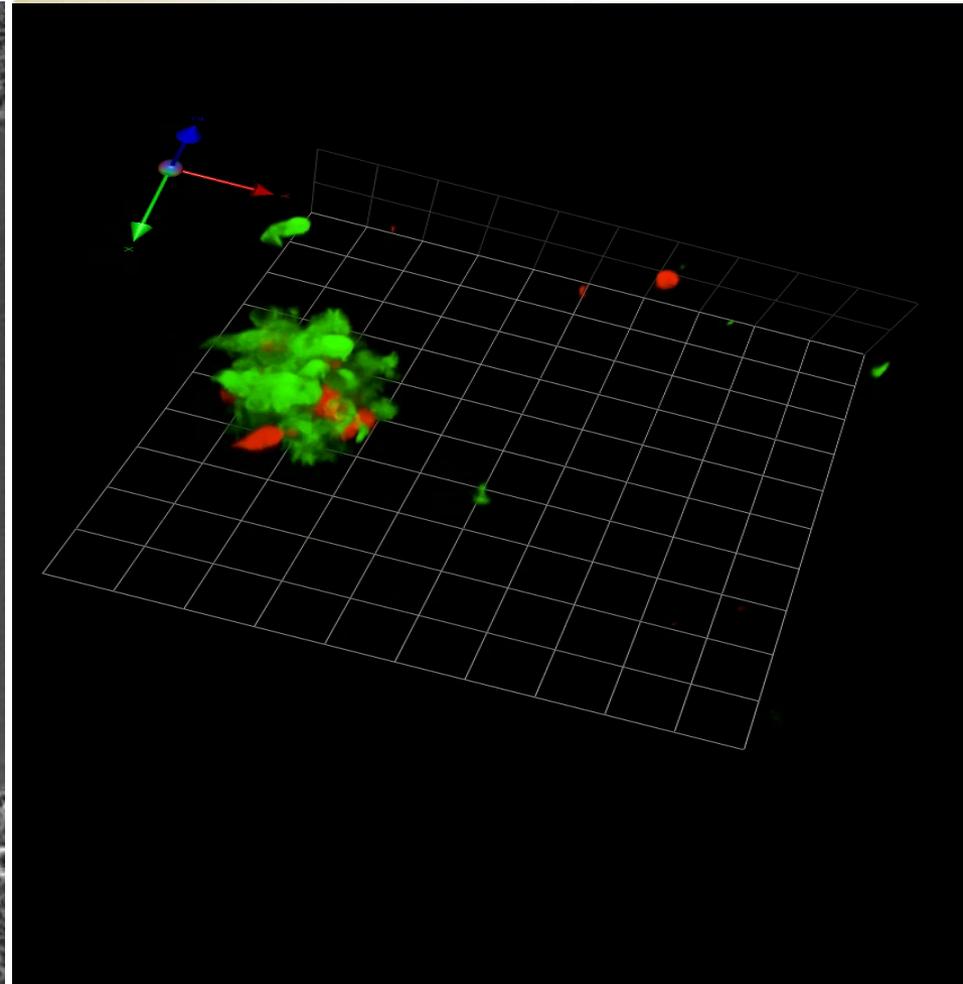
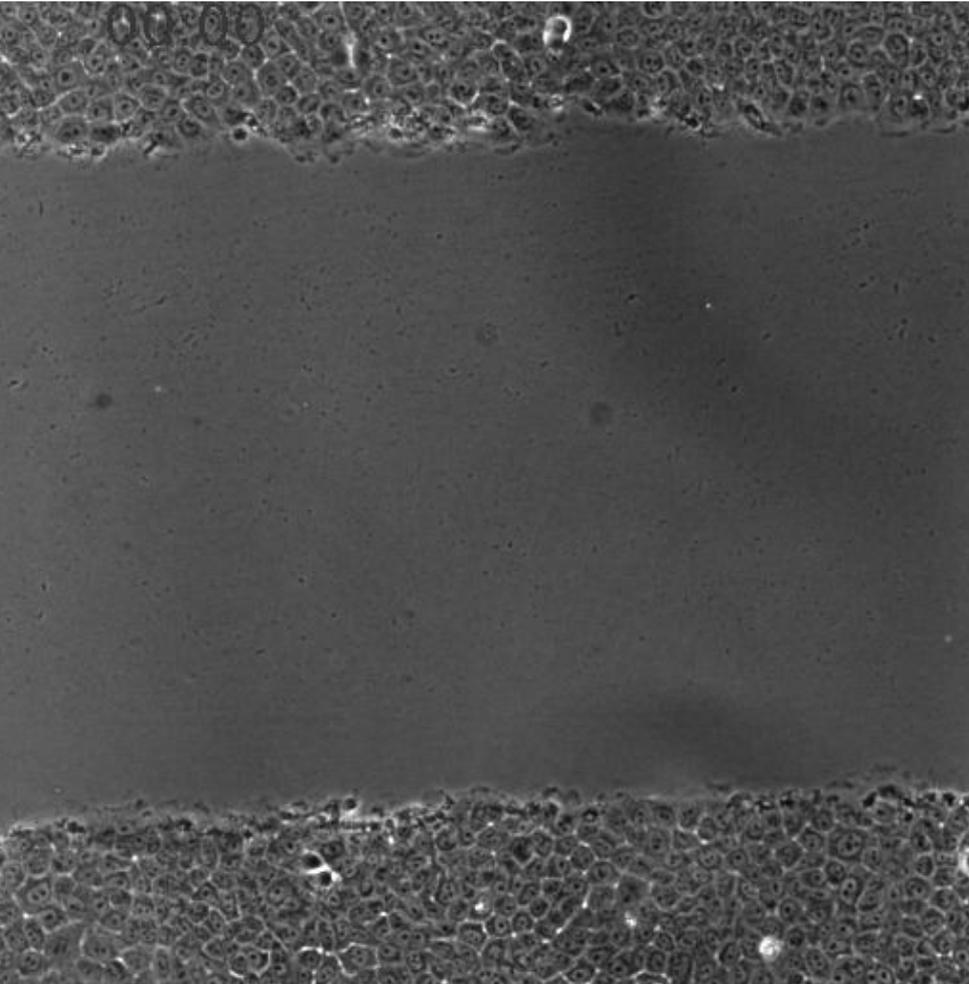




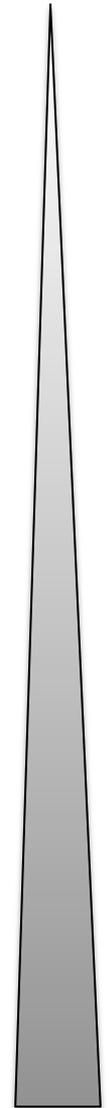
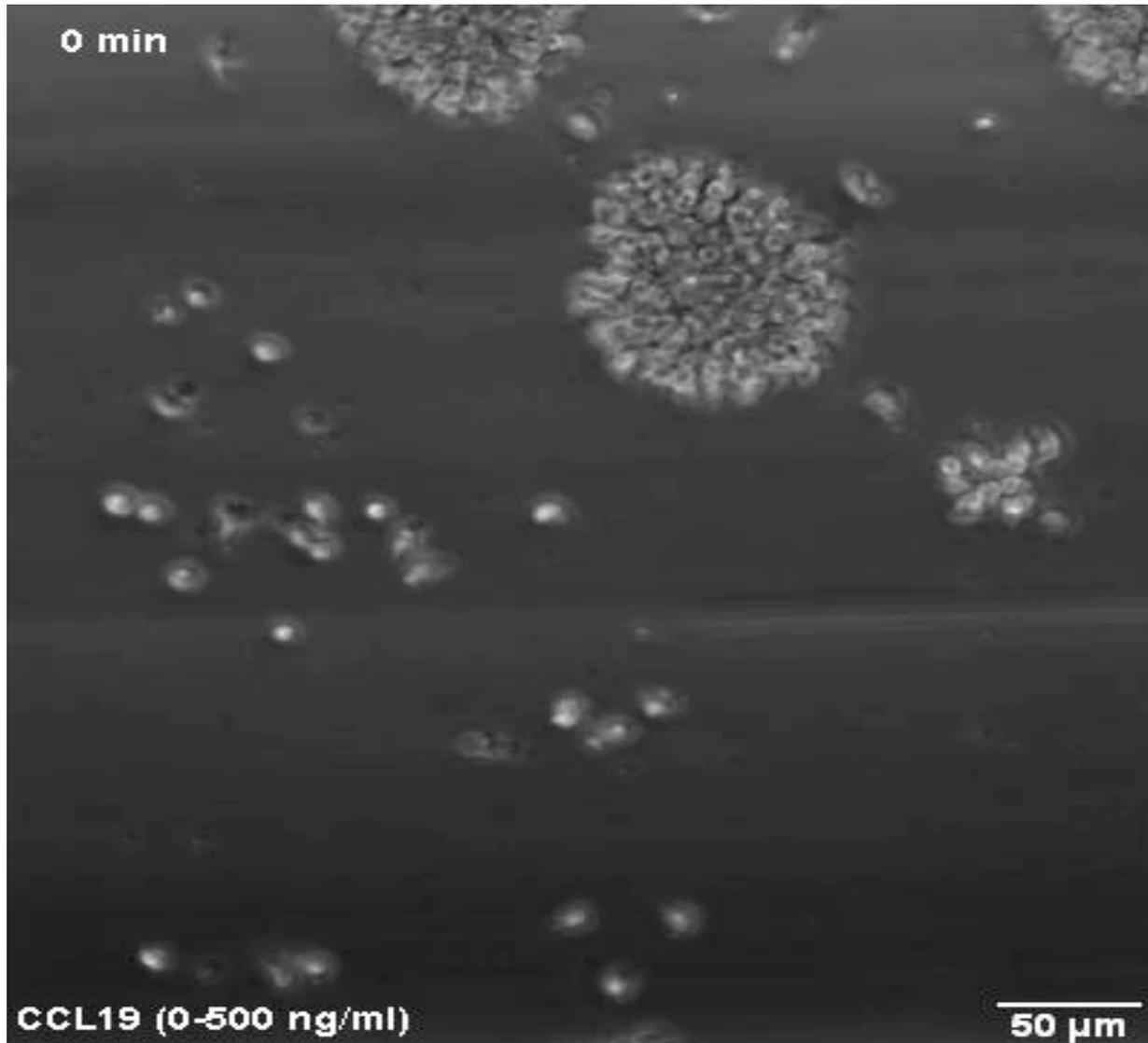
# Microscopia intravitale: a spystory



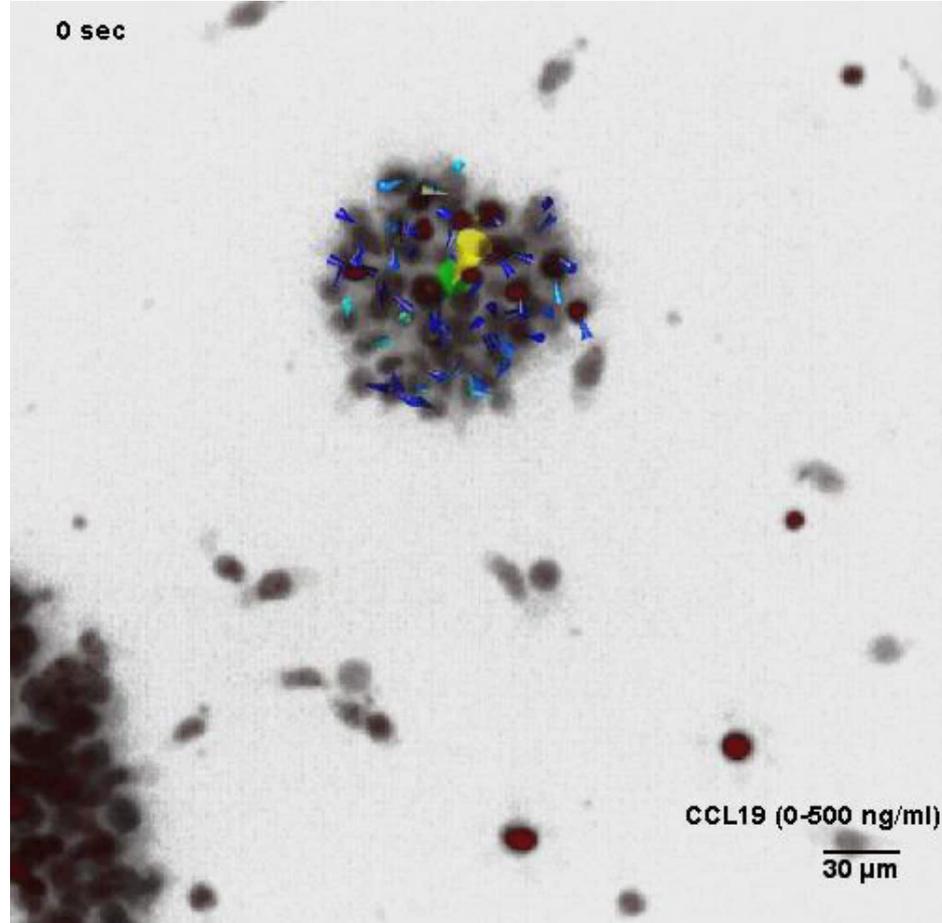
# Migrare in gruppo



# La migrazione di gruppi di cellule e' piu efficiente



# Migrare collettivamente con uno stromo di uccelli



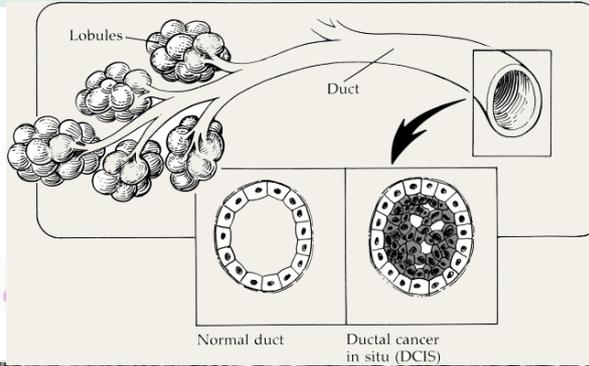
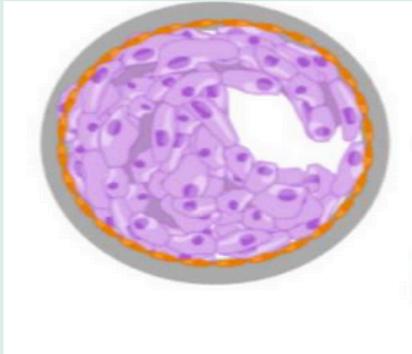
*Tumors: wounds that do not heal.  
Similarities between tumor stroma  
generation*

Dvorak HF.

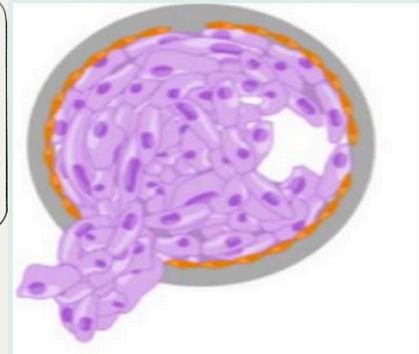
N Engl J Med. 1986 Dec 25;315(26):1650-9

# Come una ferita che non guarisce

**Carcinoma Duttale Non invasivo**



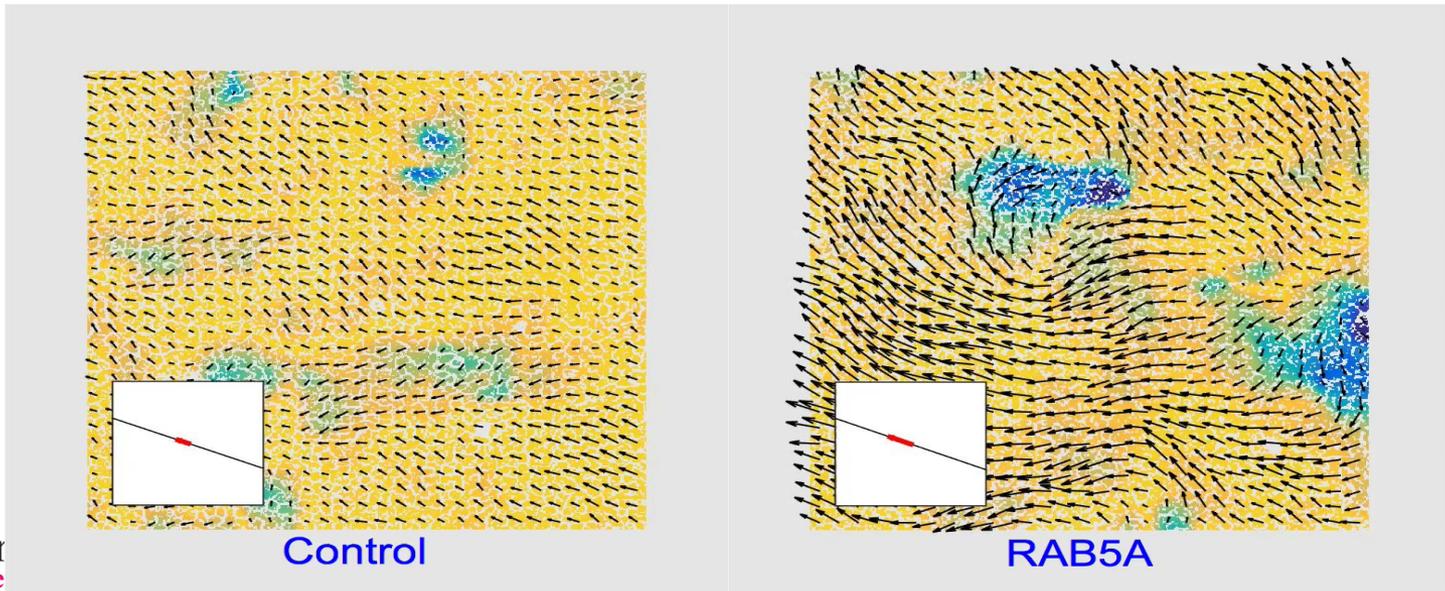
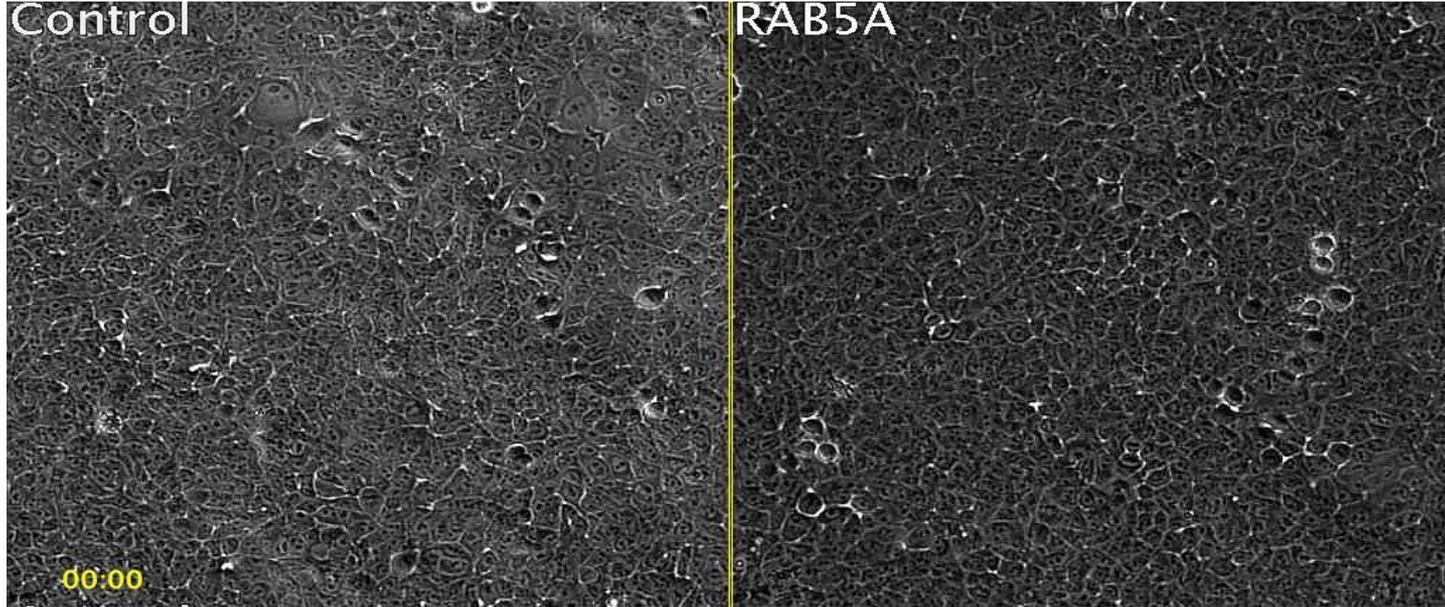
**Carcinoma Duttale Invasivo**



[Control.MCF.DCIS.com](http://Control.MCF.DCIS.com)

[RAB5A.MCF.DCIS.com](http://RAB5A.MCF.DCIS.com)

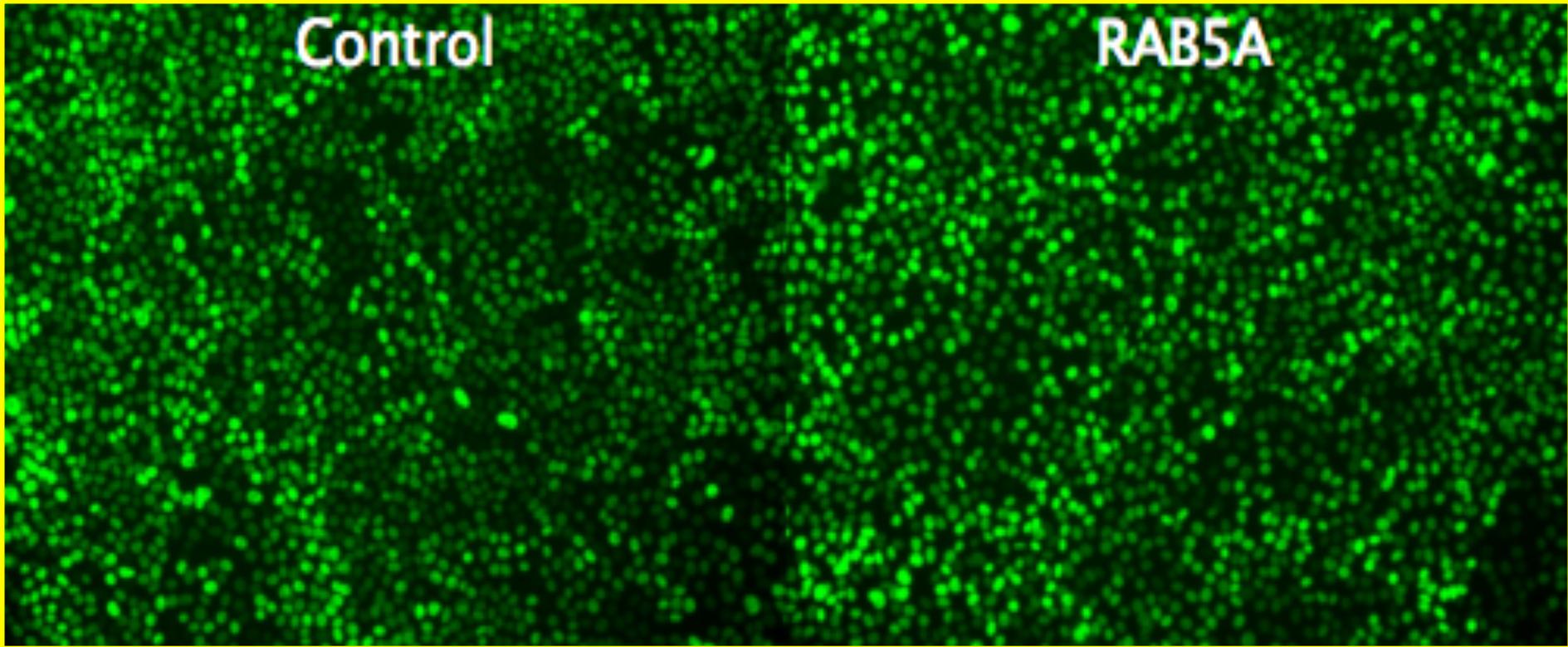
# Come una corrente nel fiume



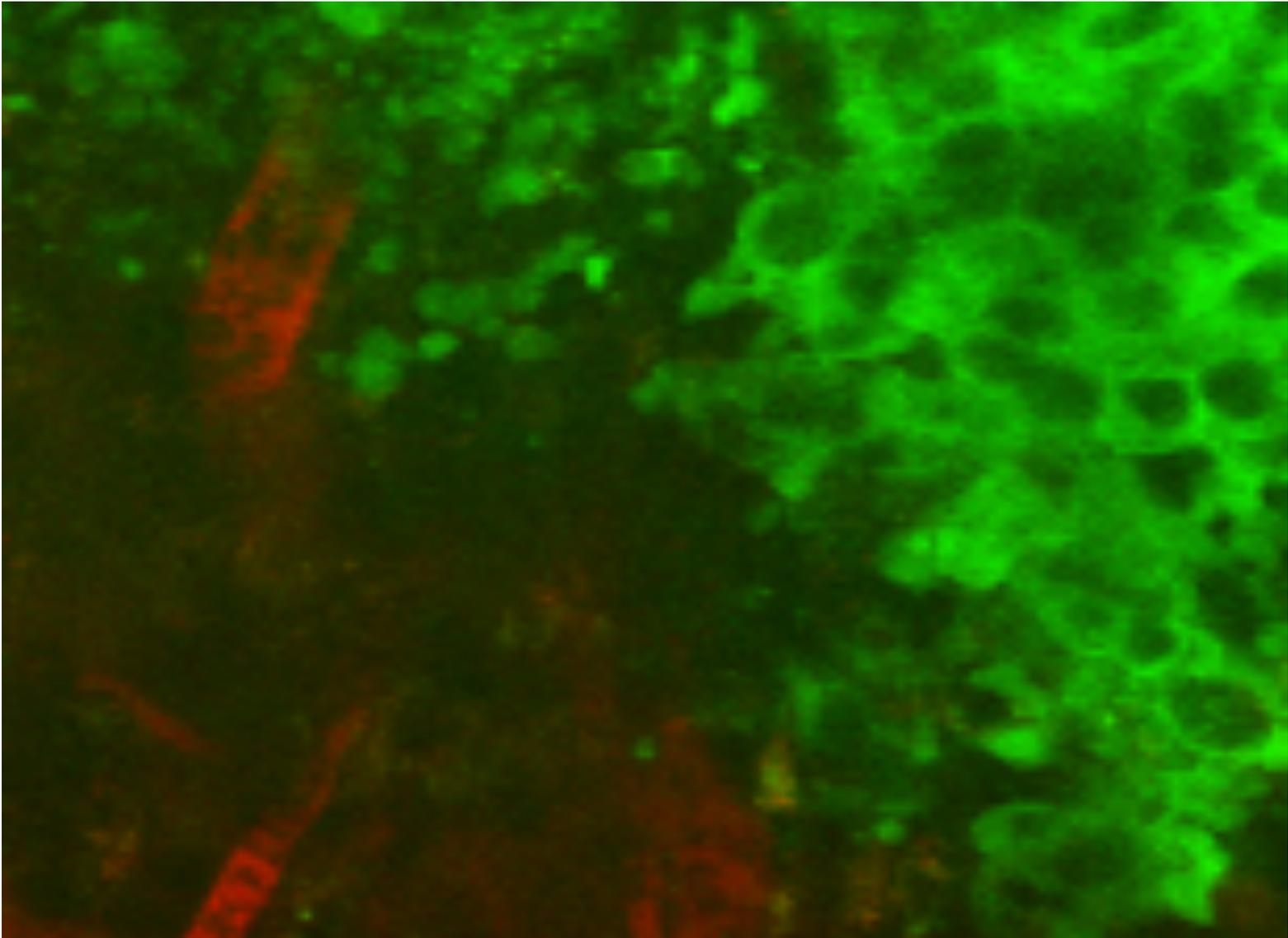
# Come una corrente nel fiume e una piggia di proiettili

Control

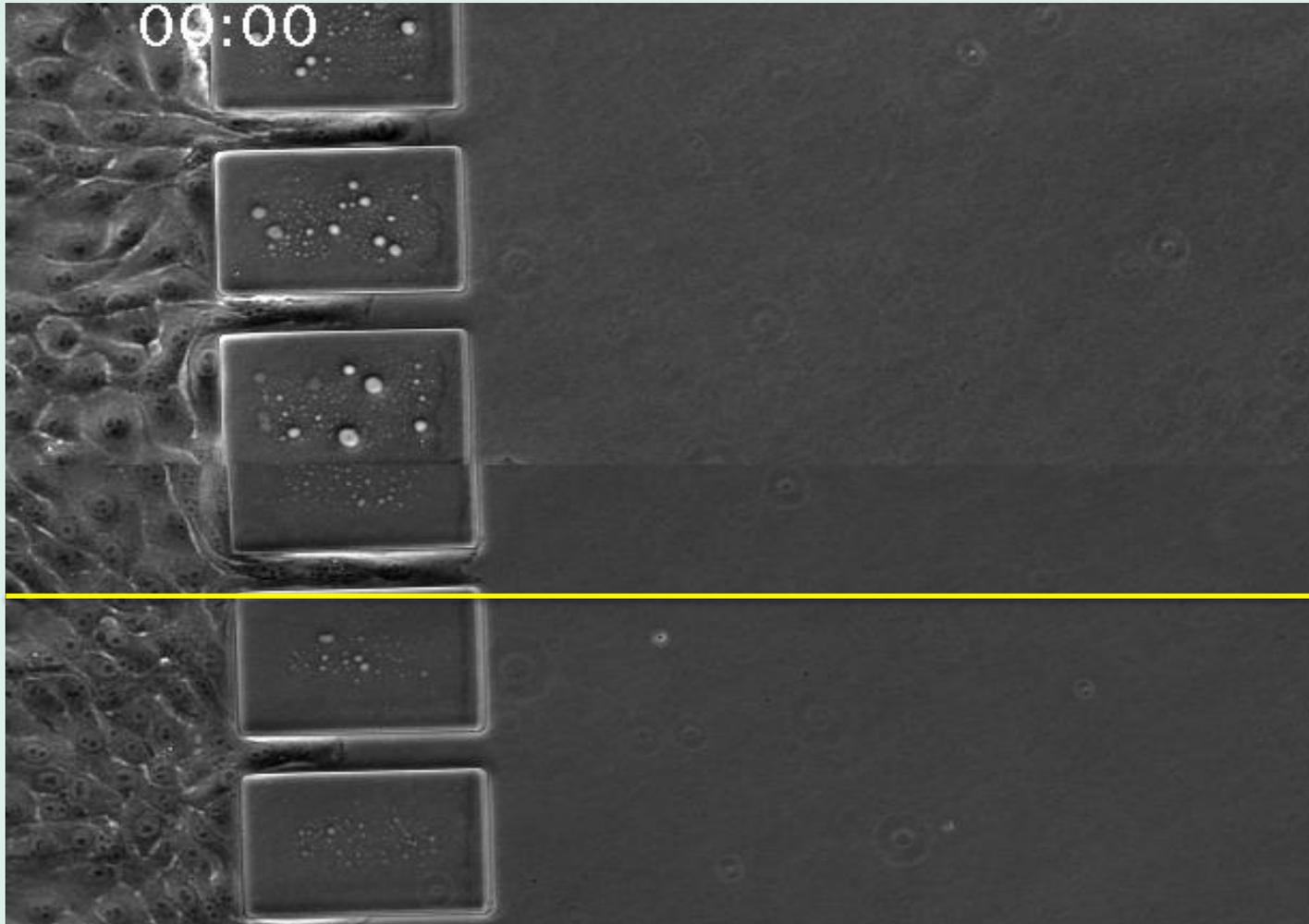
RAB5A



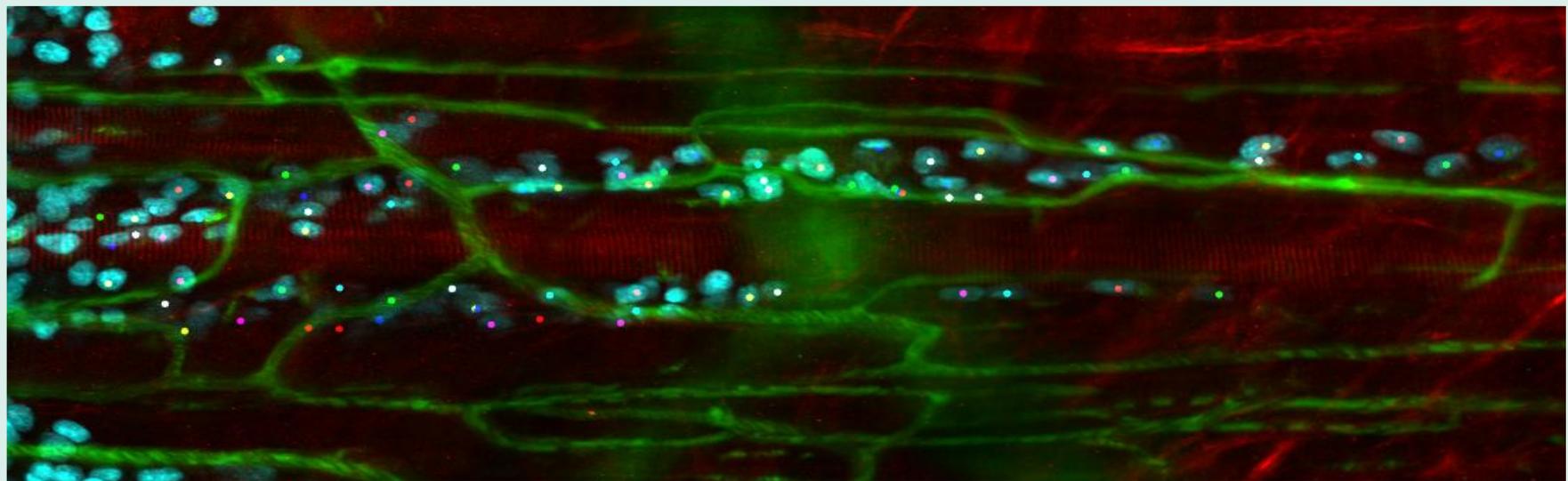
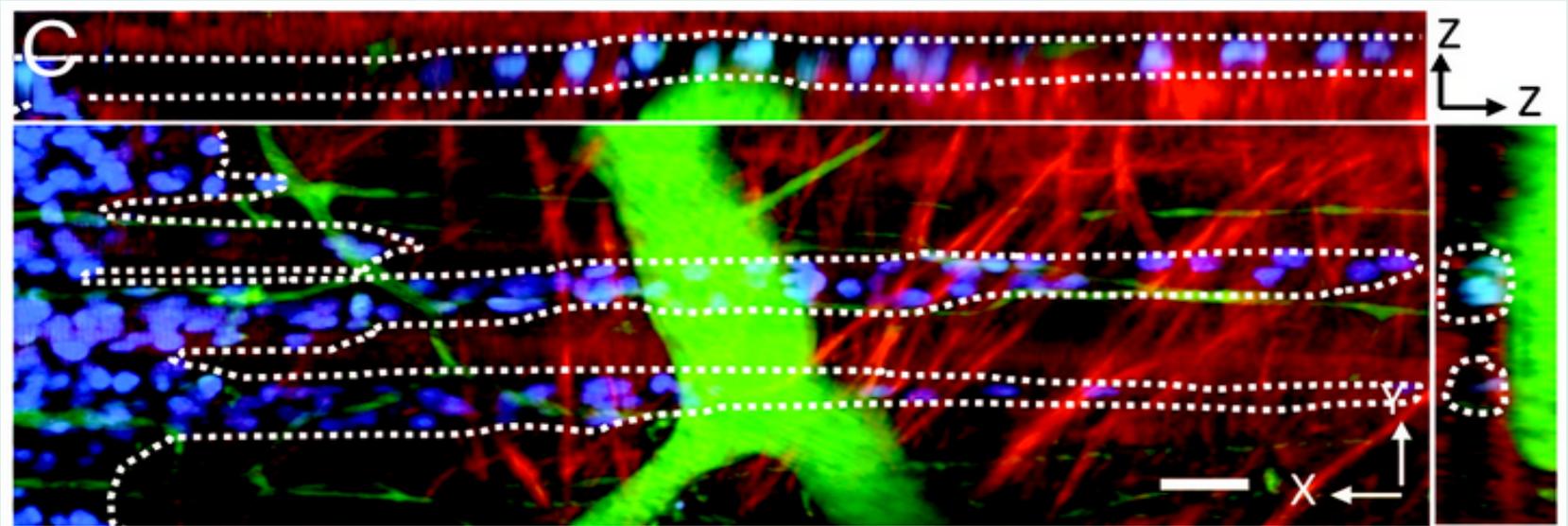
# Una telecamera in pista



# Sfruttando i piccoli spazi

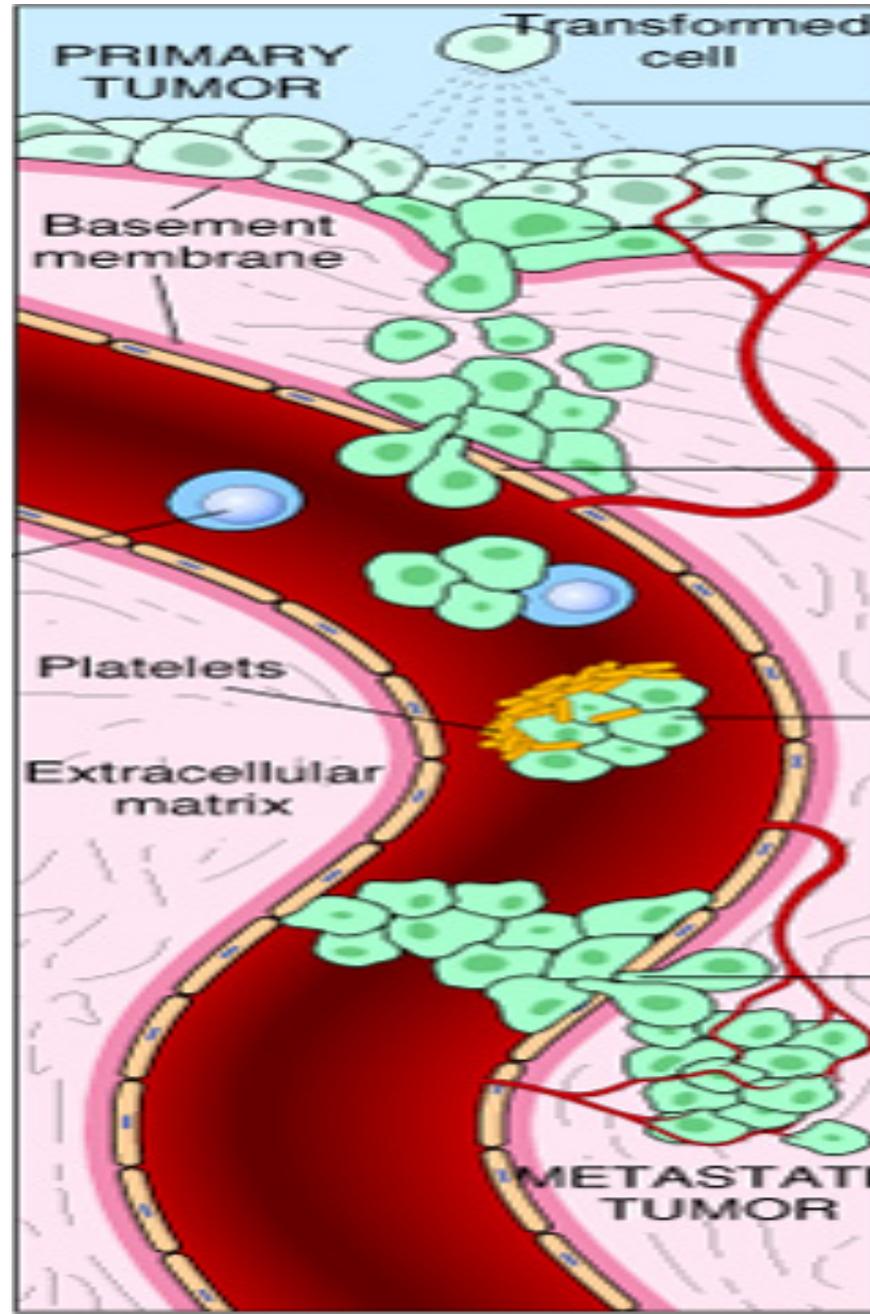


# Sfruttando i piccoli spazi



B16F10 melanoma invasion along dermal tissue interfaces. Weigelin et al. IntraVital 2012

# La sfida...



# RINGRAZIAMENTI

IEO&Mol Pat  
S. Confalonieri  
S. Sigismund  
E. Barbieri  
PP Di Fiore

Qinseng Li

Ifom imaging  
&  
Zebrafish  
facility

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Singapore,  
Weimiao Yu

UniMi, Milan  
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A. Ferrari  
M. Bergert  
T. Lendenmann  
D. Poulikakos

IBEC  
M. Uroz  
X. Trepap  
Pearson  
Academy

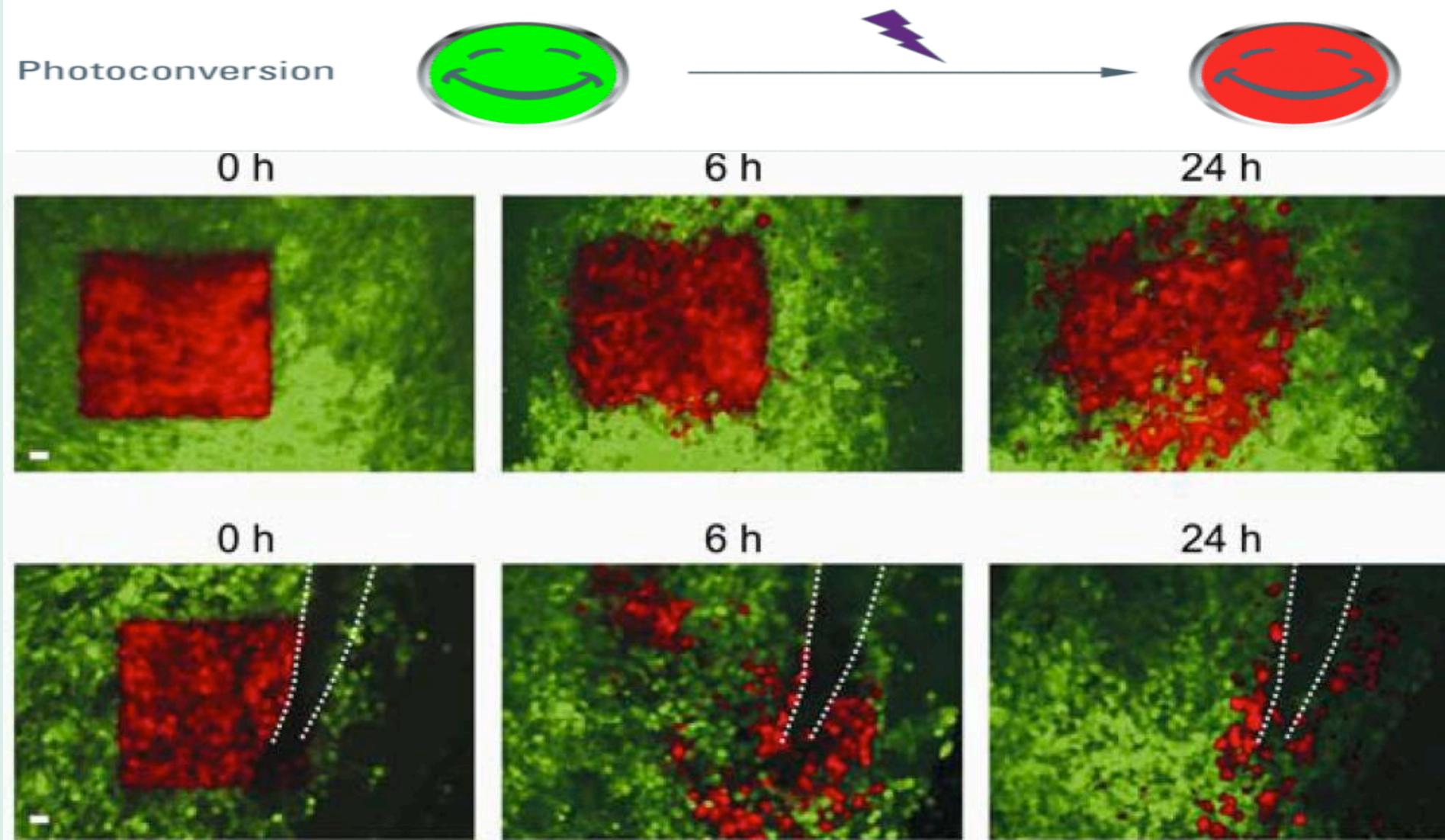


**Alumni**  
Gema Malet-Engra  
**Salvatore Corallino**  
**Martina Zobel**  
Hiro Kajiho  
Yuko Kajiho



**Grazie per la  
partecipazione!**

# Spiando un tumore che dissemina



**Informazioni utili:**  
**attestati, materiali,**  
**archivio videolezioni,**  
**calendario**

# 1. Informazioni e supporto

**Per informazioni contatta il tuo consulente personale  
vai su [pearson.it/consulenti-personali](https://pearson.it/consulenti-personali)**

**Per problemi tecnici contatta il nostro supporto  
[pearson.com/supporto](https://pearson.com/supporto)**

## 2. Attestati di partecipazione

**Novità!**

Per ottenere **l'attestato di partecipazione**, valido ai fini della certificazione delle ore di formazione obbligatoria:

**1.**

**Vai su [pearson.it/place](https://pearson.it/place)  
e rispondi ad alcune  
semplici domande di controllo**

**2.**

**In caso di esito positivo al questionario,  
scarica subito l'attestato**

### 3. Tutti i materiali e le videolezioni registrate disponibili sulla Pearson Education Library:



### 3. I prossimi appuntamenti su [pearson.it/ pearson-academy](https://www.pearson.it/pearson-academy)

# La Pearson Academy su Facebook

## Seguiteci su Facebook!

Potrete restare aggiornati sui prossimi appuntamenti di formazione, ricevere articoli, approfondimenti, notizie sulla scuola in Italia e nel mondo, e molto altro. E potrete naturalmente condividere quello che vi piace o lasciare commenti.

Pagina Fan

## Pearson Academy – Italia



Facebook interface showing the Pearson Academy - Italia page. The page header includes the name and a search bar. The profile picture is the Pearson Academy logo. The cover photo shows a smiling woman with long blonde hair making an 'OK' hand gesture. The main post is titled "#CartadelDocente Per la tua formazione, scegli l'esperienza di Pearson!" and includes a link to IT.PEARSON.COM. The post has 24 shares and a comment from Martina Nordio.

IMPARARE SEMPRE