BASSER CENTER FOR BRCA

Penn Medicine

Metastatic Breast Cancer (MBC) in 2019

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Life After Breast Cancer

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Penn Medicine

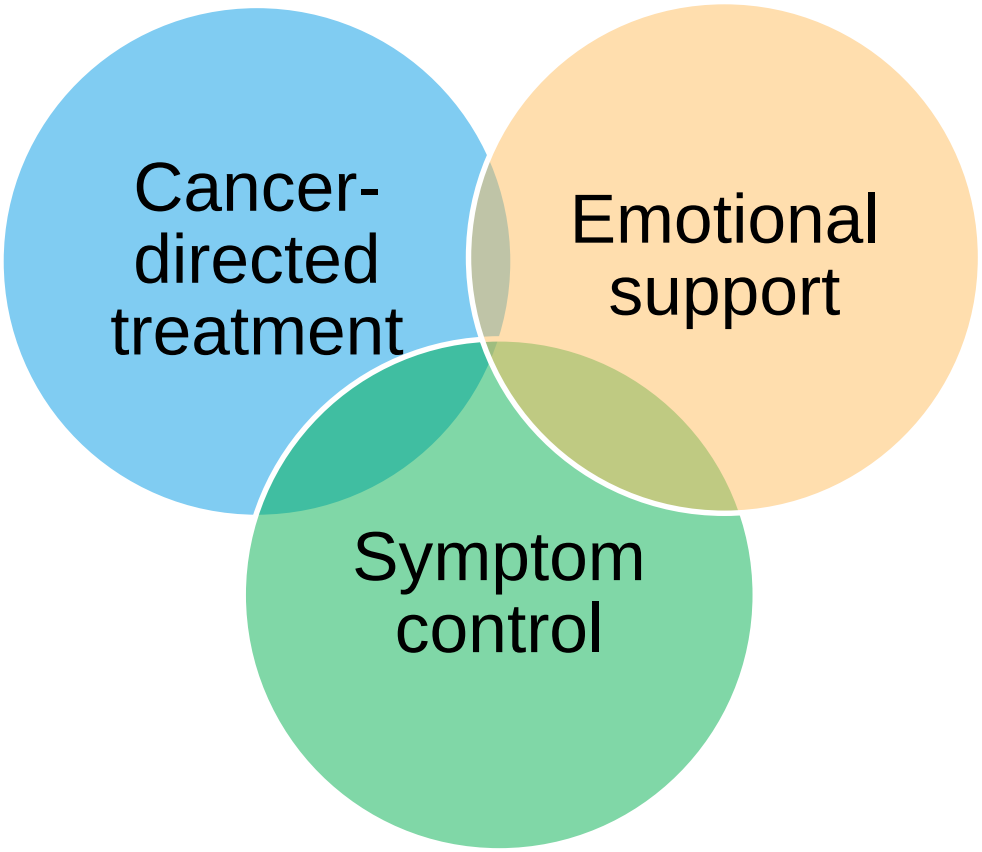
Disclosures

- **Research funding:** AstraZeneca, Pfizer, Zenith
- **Honoraria for educational events:** OncLive, Association of Molecular Pathologists
- **Consulting/Advisory board:** Tmunity

What does “metastatic” mean?

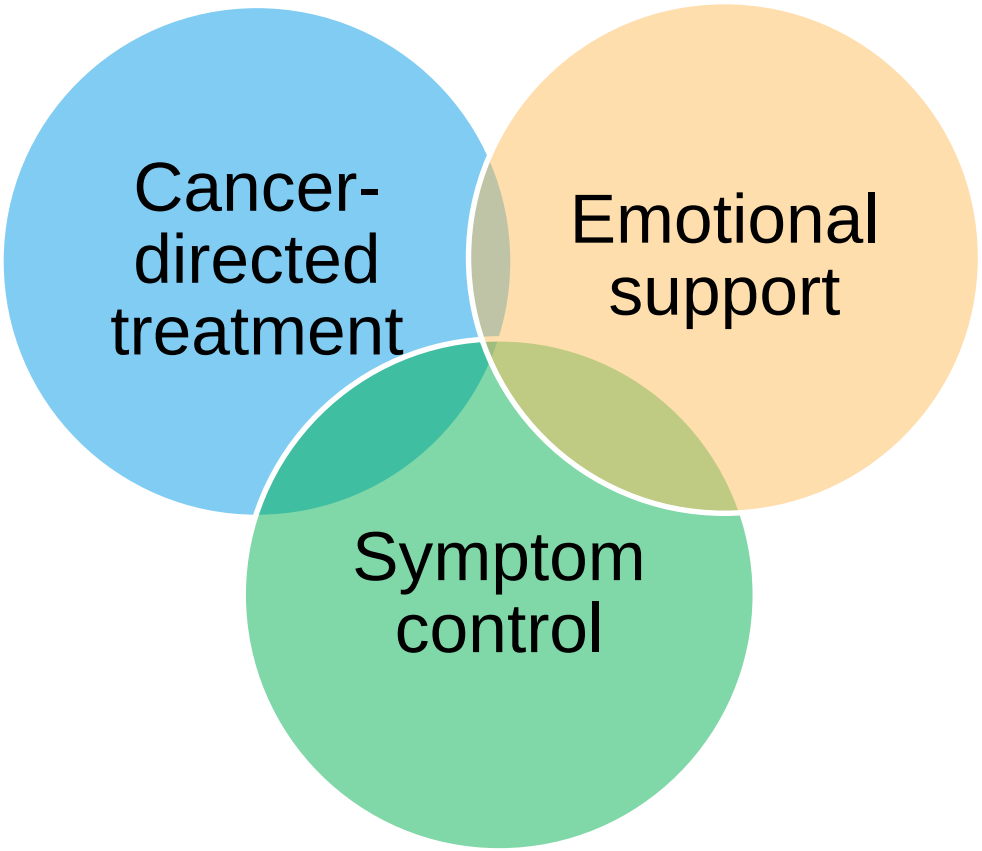
- Metastatic breast cancer (MBC) is breast cancer that has spread outside of the breast, to another location like the bone, lung, liver, etc.
- Breast cancer that has spread to a different location is still considered breast cancer (for example, breast cancer in the lung is different from lung cancer)
- Generally, we cannot cure cancer once it is metastatic, but we can treat it, often for years (analogous to diabetes or high blood pressure)
- Stage IV breast cancer = metastatic

Our approach to caring for pts with MBC



Our approach to caring for pts with MBC

- Finding treatments that allow you to live as well as possible for as long as possible
- Monitoring



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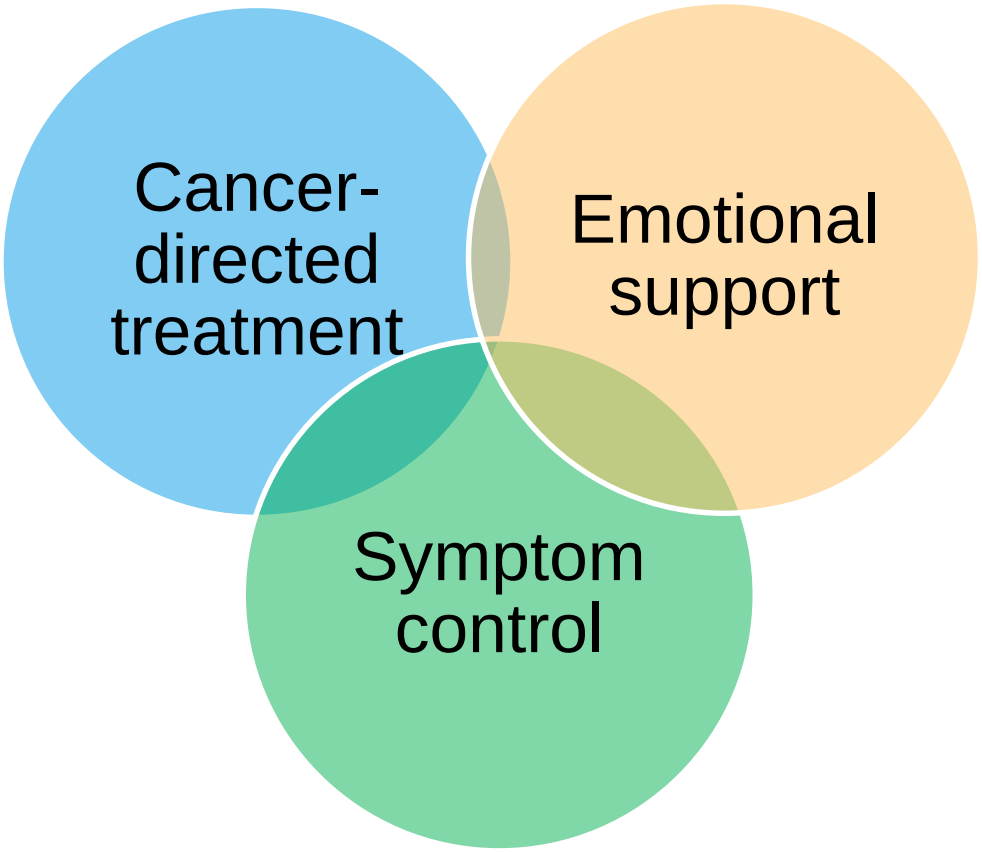

Helping with:

- Fear
- Anxiety
- Worry about family members
- Loss of control, wondering what else you can do
- Support for caregivers

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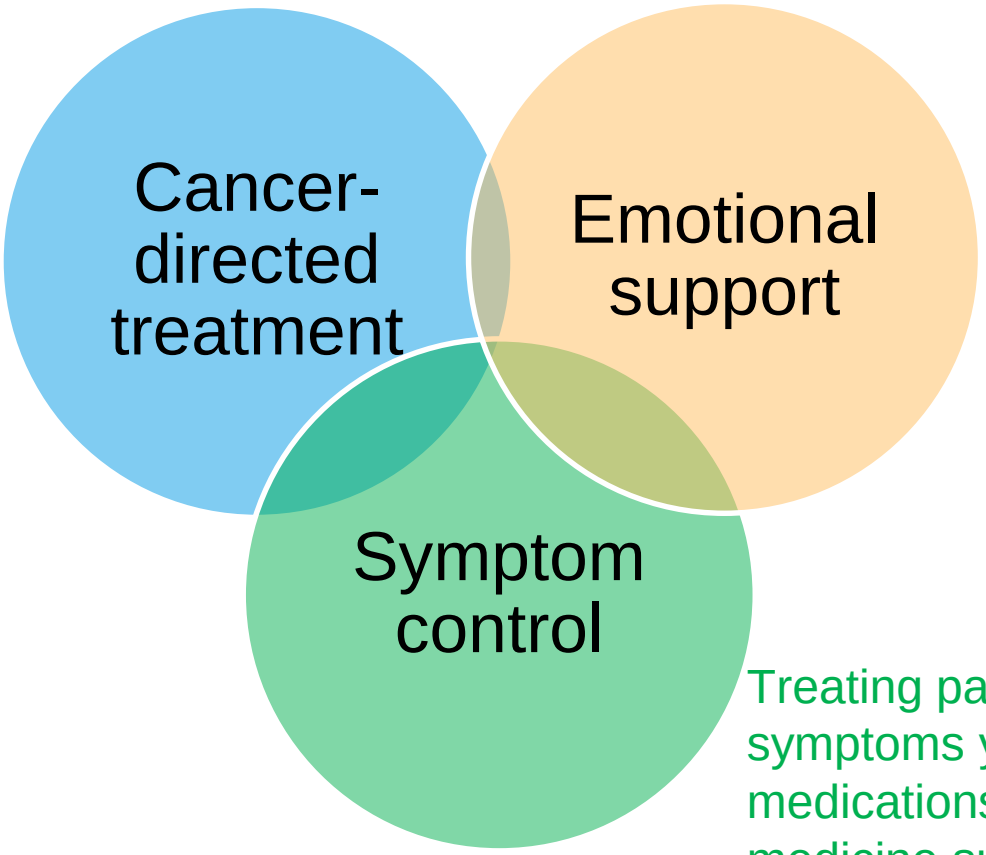

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Treating pain and other symptoms you might have with medications, integrative medicine support

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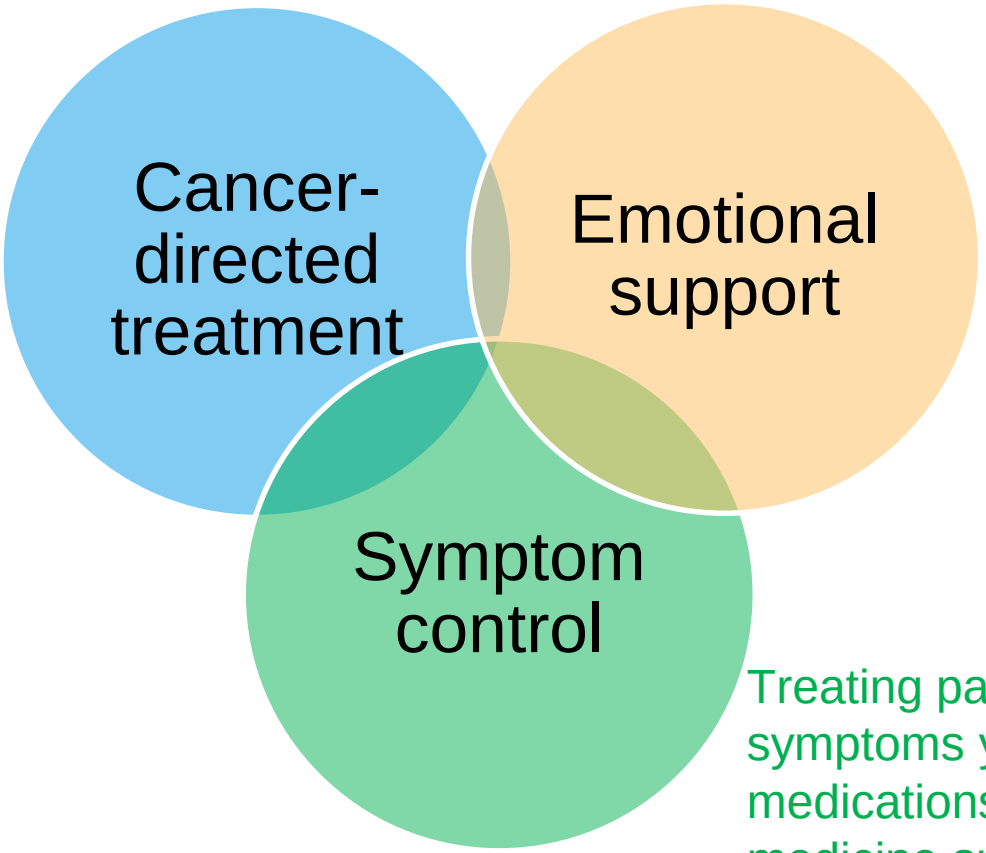

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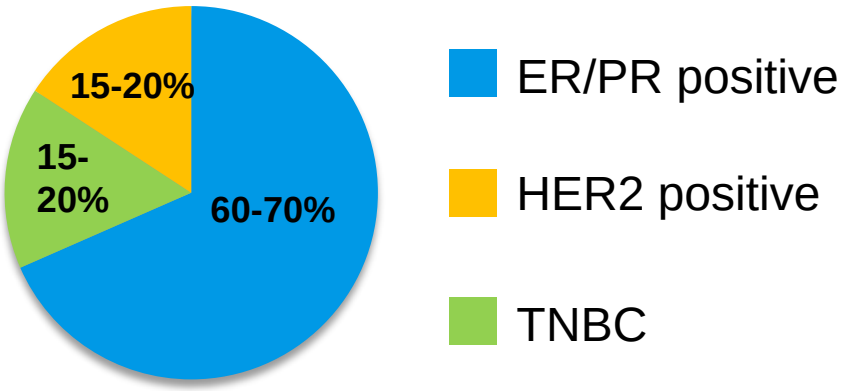
Treating pain and other symptoms you might have with medications, integrative medicine support

- We need to understand your thoughts, concerns and needs
- We partner closely with palliative care

How do we classify MBC? 5 years ago…

- Any breast cancer – look at 3 things under the microscope: ER, PR, HER2



- These features tell us about what treatments are and are not likely to work
- These features are still important, but now we also consider additional factors

How do we classify MBC? 2019…

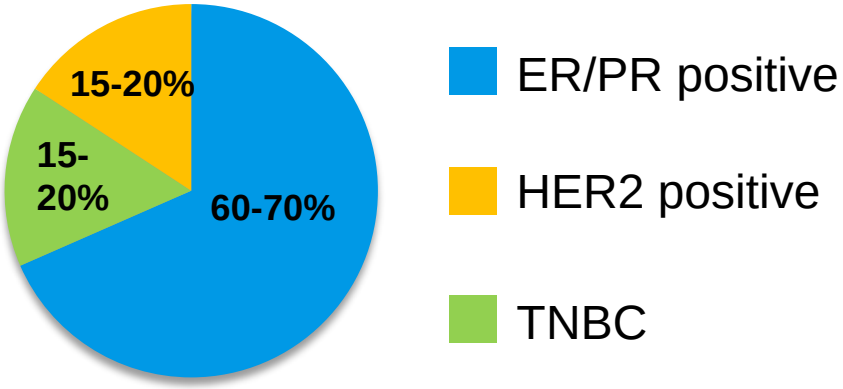
- Any breast cancer – look at 3 things under the microscope: ER, PR, HER2

Also:

PDL-1

BRCA1/2

PIK3CA



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MBC treatment 5 years ago

- If cancer is hormone-driven, anti-estrogen therapy
- If anti-estrogen therapy was felt to be insufficient, ineffective, or if cancer is not hormone-driven, chemotherapy
- If cancer is HER2-driven, trastuzumab / pertuzumab-based treatment
- Few targeted therapies (everolimus)
- No immunotherapy approvals
- **Clinical trials are always important to consider**

MBC treatments available 5 years ago

HER2-targeted tx

everolimus

Anti-estrogen therapy

MBC treatments available in 2019

palbociclib

talazoparib

abemaciclib

alpelisib

HER2-targeted tx

pembrolizumab

ribociclib

everolimus

olaparib

talazoparib

atezolizumab

Anti-estrogen therapy

What are some of the new treatments for MBC?

- **Hormone receptor positive (HR+) MBC**
  - CDK4/6 inhibitors: palbociclib (Ibrance), ribociclib (Kisqali), abemaciclib (Verzenio)
  - PI3K inhibitor: alpelisib (Piqray)
- **Triple-negative (TN) MBC**
  - Immunotherapy: atezolizumab (Tecentriq)
- **MBC with a BRCA mutation**
  - PARP inhibitors: olaparib (Lynparza), talazoparib (Talzenna)
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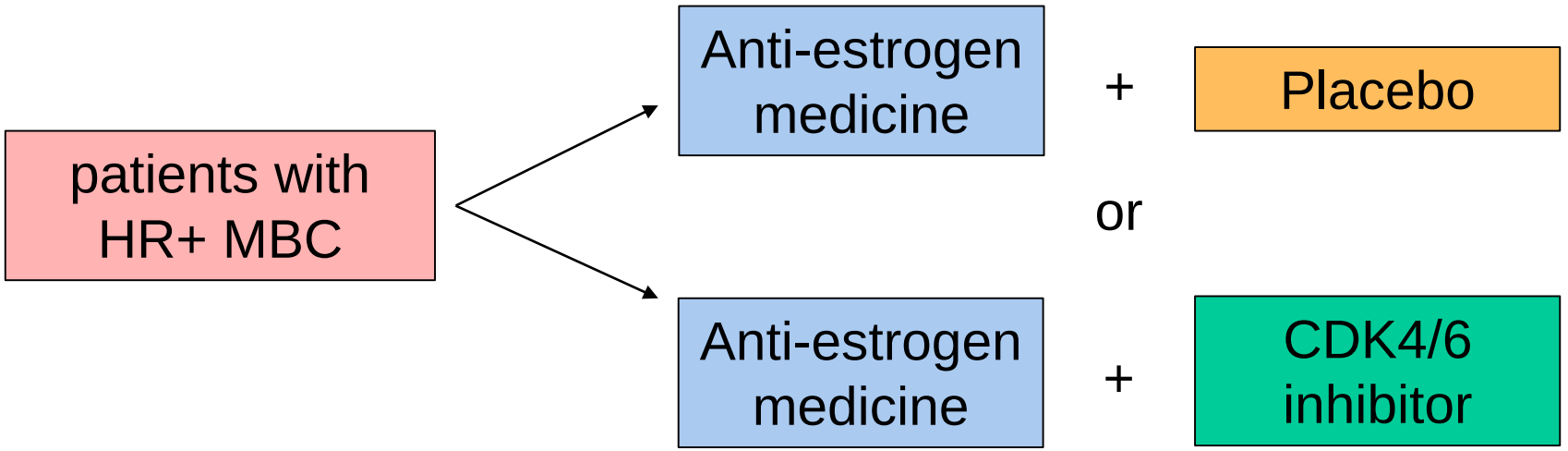
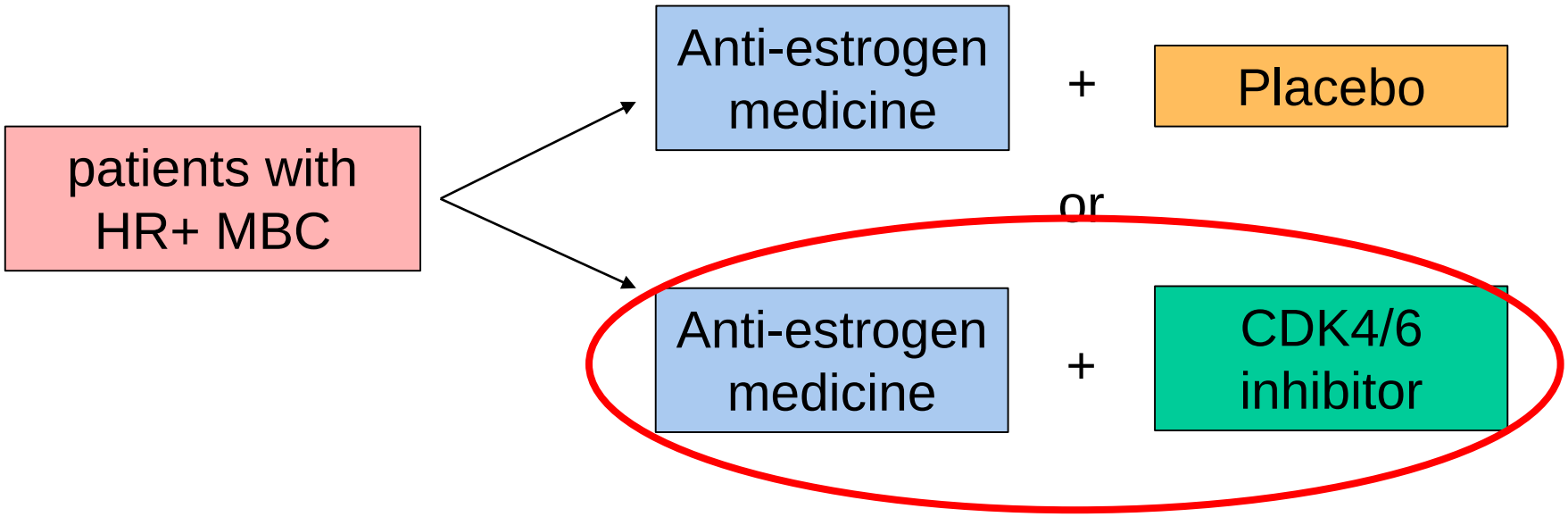
These drugs work by stopping cancer cells from making more of themselves

Drug 1: CDK4/6 inhibitors



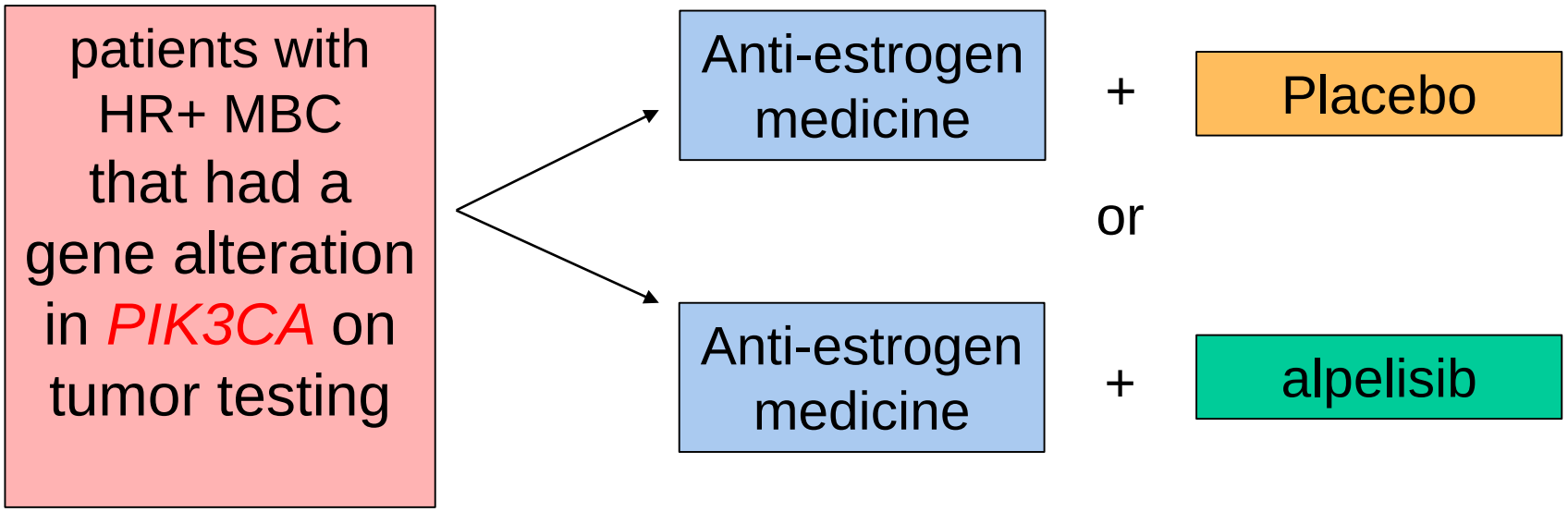
Drug 1: CDK4/6 inhibitors

Several trials showed us that adding a CDK4/6 inhibitor to anti-estrogen therapy works to treat HR+ MBC



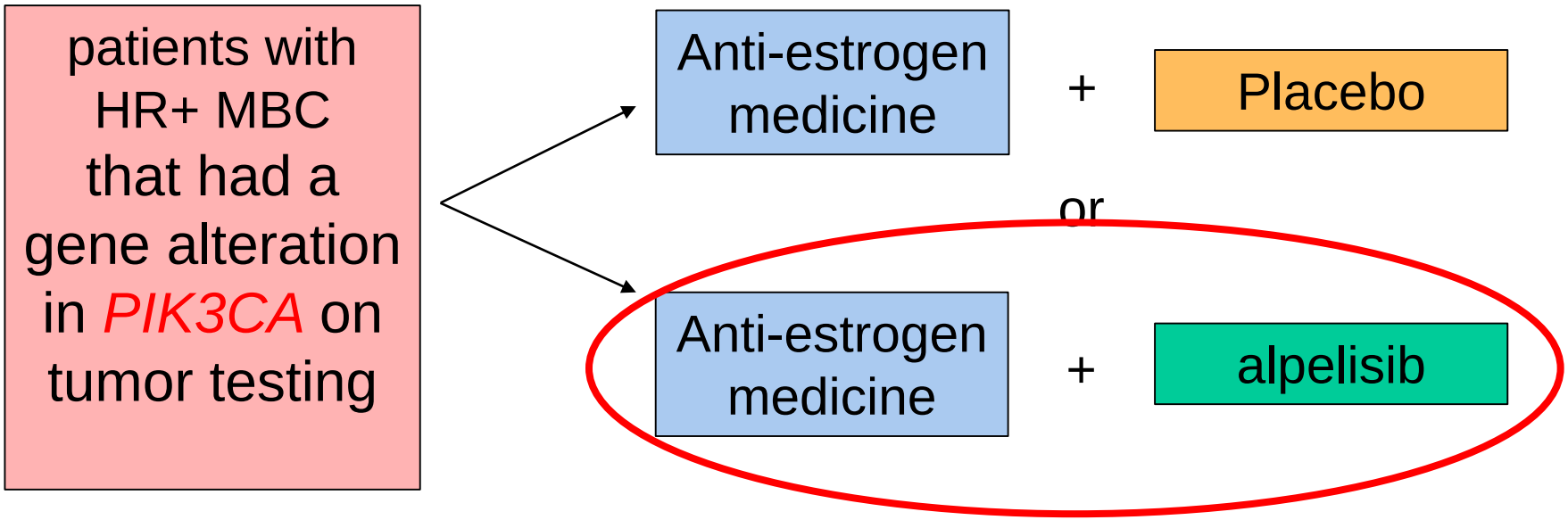
- Combination was better
- Not a lot of side effects
- Our first choice for HR+ MBC

Drug 2: PI3K inhibitor: alpelisib (Piqray)



Drug 2: PI3K inhibitor: alpelisib (Piqray)

The "SOLAR-1" trial showed us that alpelisib works to treat HR+ MBC when the tumor has a mutated version of a gene called *PIK3CA*



- Combination was better
- But some side effects
- A good option, but not our first choice

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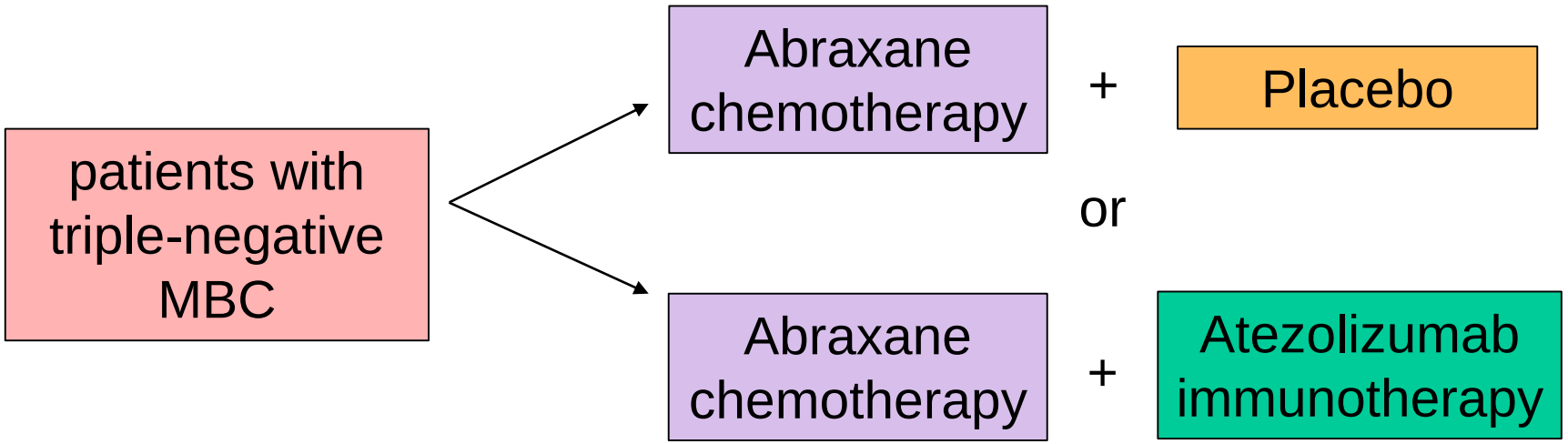
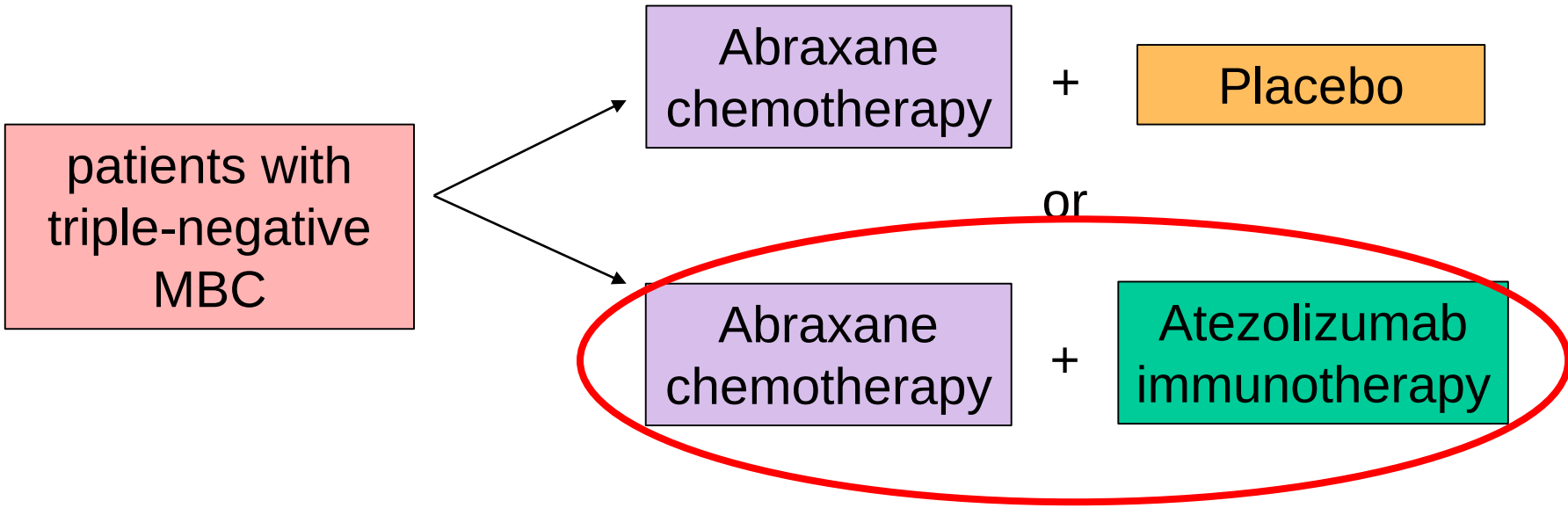
Immunotherapy "releases the brakes" on your immune system, so the immune system can fight the cancer

Immunotherapy: atezolizumab (Tecentriq)



Immunotherapy: atezolizumab (Tecentriq)

This clinical trial showed us that immunotherapy works to treat triple-negative MBC when the tumor has a protein on it called PDL1



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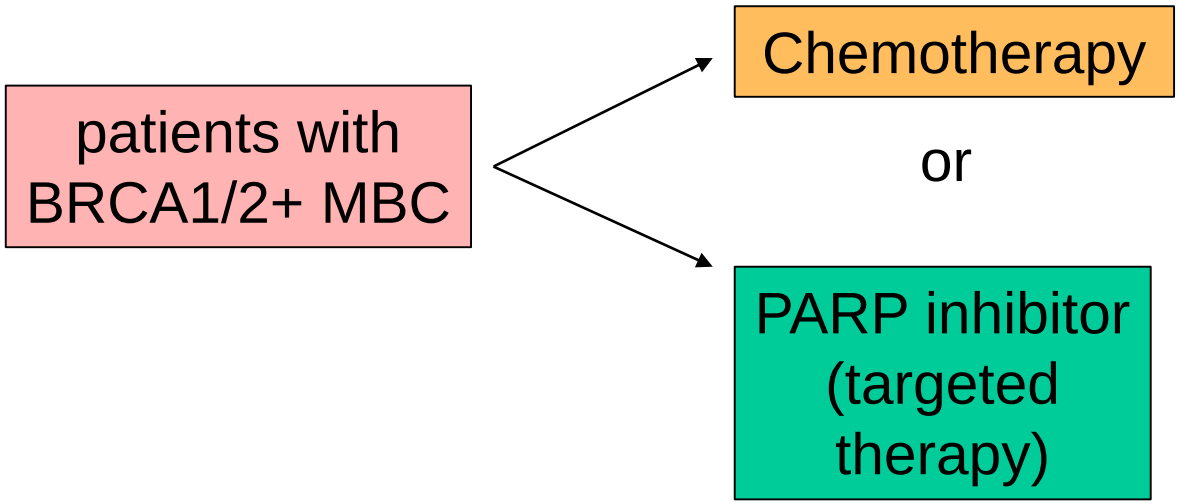
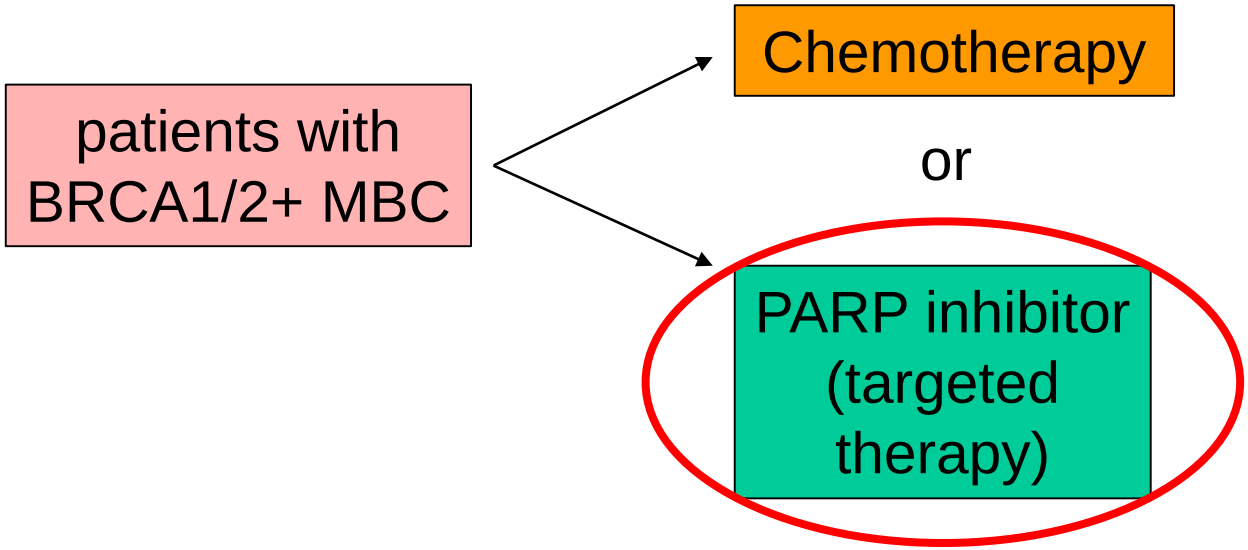
These drugs work by killing cancer cells that have *BRCA1/2* mutations

PARP inhibitors:



PARP inhibitors:

These clinical trials showed us that PARP inhibitors work to treat MBC when the patient has an inherited mutation in *BRCA1* or *BRCA2*



- PARP inhibitor was better
- Not a lot of side effects
- A great choice for *BRCA1/2*+ MBC

There are several new treatments for MBC

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FDA approved in:
- **2015**
- **2017**
- **2017**
- **May 2019**

- **Triple-negative (TN) MBC**
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FDA approved for MBC March 2019

- **MBC with a BRCA mutation**
  - PARP inhibitors:
    - olaparib (Lynparza)
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FDA approved in:
- **January 2018**
- **October 2018**

MBC: the bottom line

- There is significant progress being made

We have gone from this

HER2-targeted
tx
everolimus

Anti-estrogen
therapy

To this

palbociclib

talazoparib

abemaciclib

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Anti-estrogen therapy

Because of patients like you!

MBC: the bottom line

- There is significant progress being made
- More on the horizon (targeted therapies for HER2+ MBC including margetuximab, tucatinib, DS-8201)
- Even more being investigated (CAR-T therapy, other targeted therapies)
- But a lot of work left to do

THANK YOU!

QUESTIONS?