

Management of Side Effects of CDK4/6 inhibitors

Spalt Martina BSc

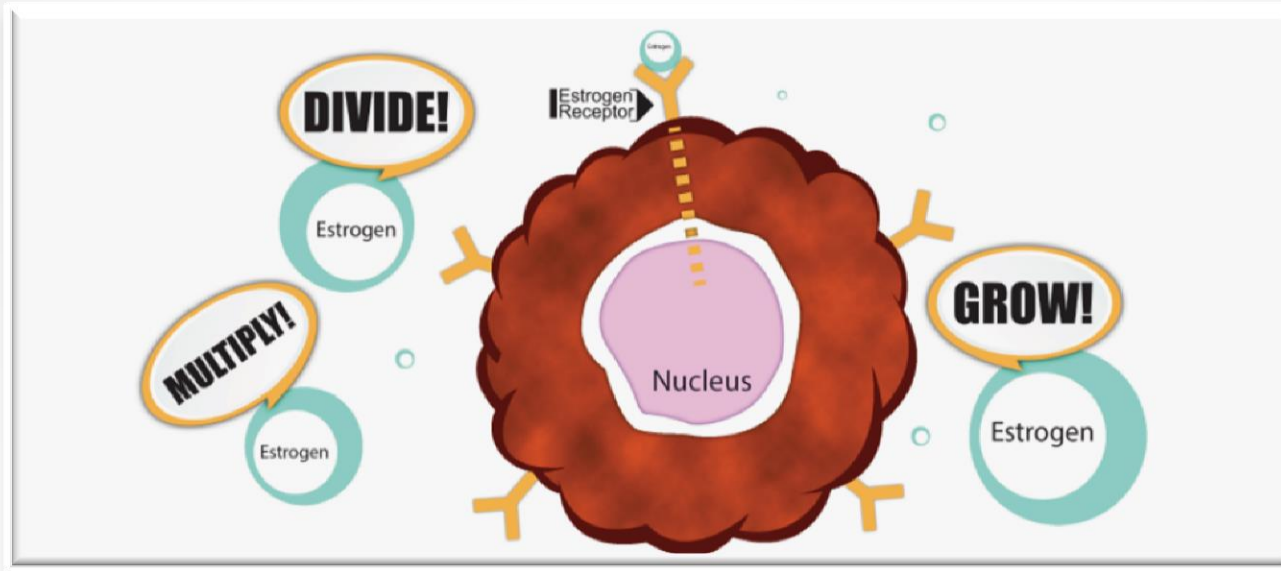
Kasamas Claudia MSc

How does a CDK 4/6 Inhibitor work?

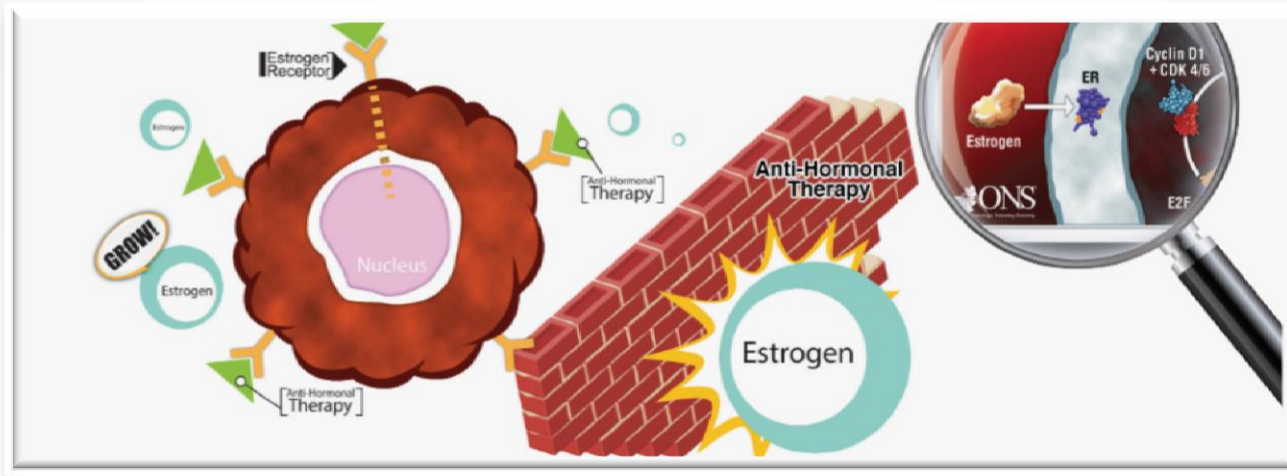
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Anti-Hormonal Therapy & CDK 4/6 Inhibitor
Dual Inhibition of ER+ Metastatic Breast Cancer

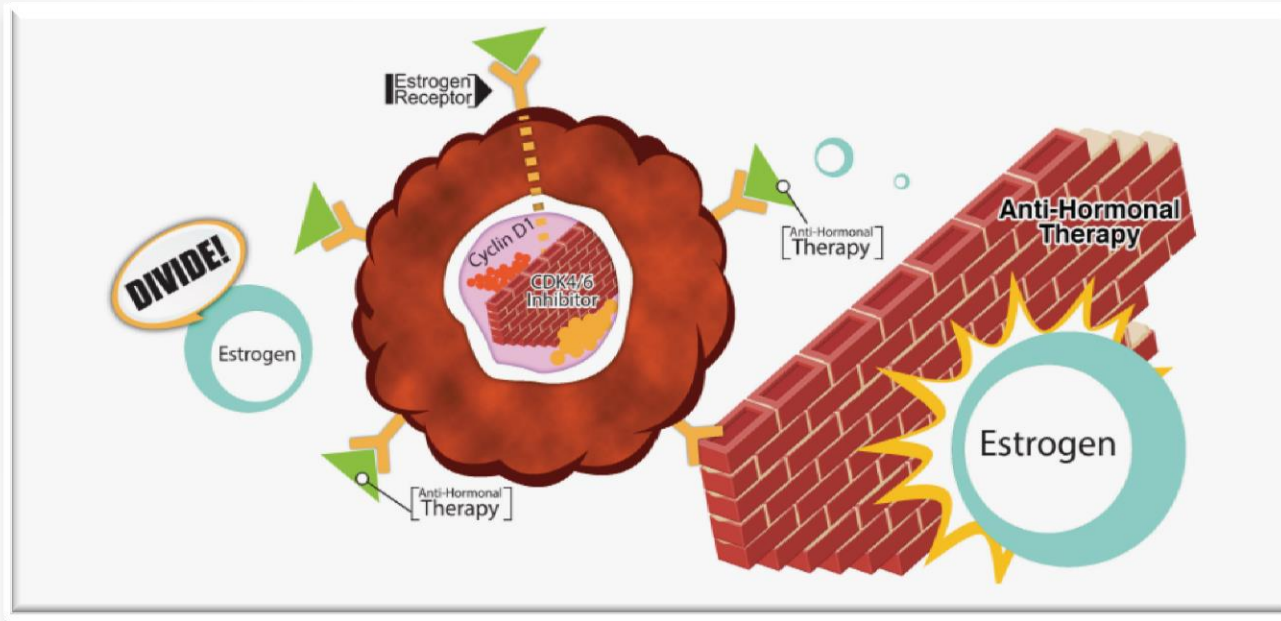
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- In a malignant ER+, HER 2 breast cancer cell, the signaling pathway sends incorrect information to the nucleus.
- This signal is started from estrogen outside of the cell sending the message through the estrogen receptors on the surface of the cell, which carries the overactive signaling to proteins (CDK4&6) in the nucleus. (ONS, 2020)



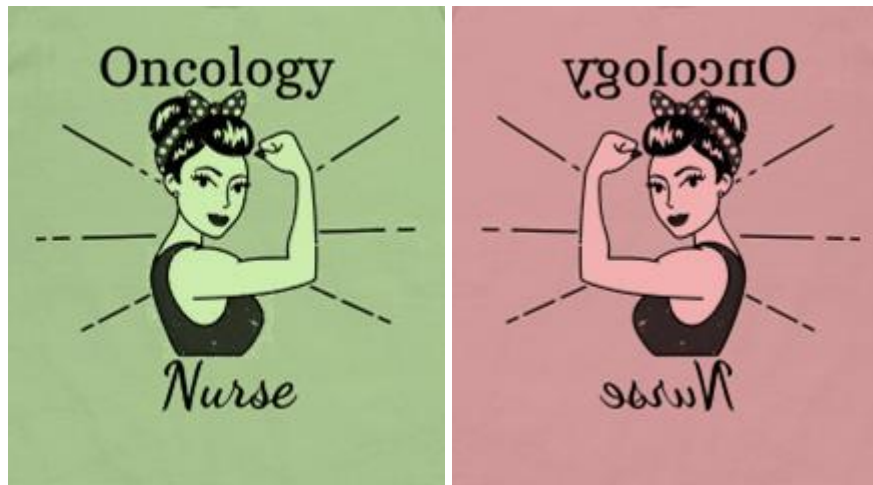
Anti-Hormonal Cancer treatment blocks the upstream signaling pathway between estrogen and the estrogen receptor that is needed to continue the cell dividing process. (ONS, 2020)



When administering a CDK4/6 inhibitor in combination with anti-hormonal therapy, you are blocking two portions signaling pathways. (ONS, 2020)

Joined forces

AHOP BCN's



And now..

...

Our Breast Care Nurse takes over

Breast Care Nurse

Information- Education-Counseling

Kasamas Claudia MSc

Curriculum vitae

- Registered Nurse since 2009
- Further education in Palliative Care 2013
- Further education as Breast Care Nurse (BCN) 2015
- Master of Science (MSc) in Advanced Nursing Counseling 2017
- Member of AHOP and Austrian Association of BCN`s

Agenda

1. Definition BCN

2. Side effects of CDK 4/6 inhibitors

3. Patienteducation

Definition BCN

„Breast Care Nurse: A nurse with specialist training in breast care nursing.“ (Wilson, 2013, P.3581).

Skills/Advanced knowledge:

- Therapy possibilities: Chemo-, Radio-, endocrine Therapy
- Family history and genetics
- Breast screening
- Prosthesis fitting
- Recovery, rehabilitation and follow up
- Management of side effects
- Breast surgery and reconstruction
- Wound management

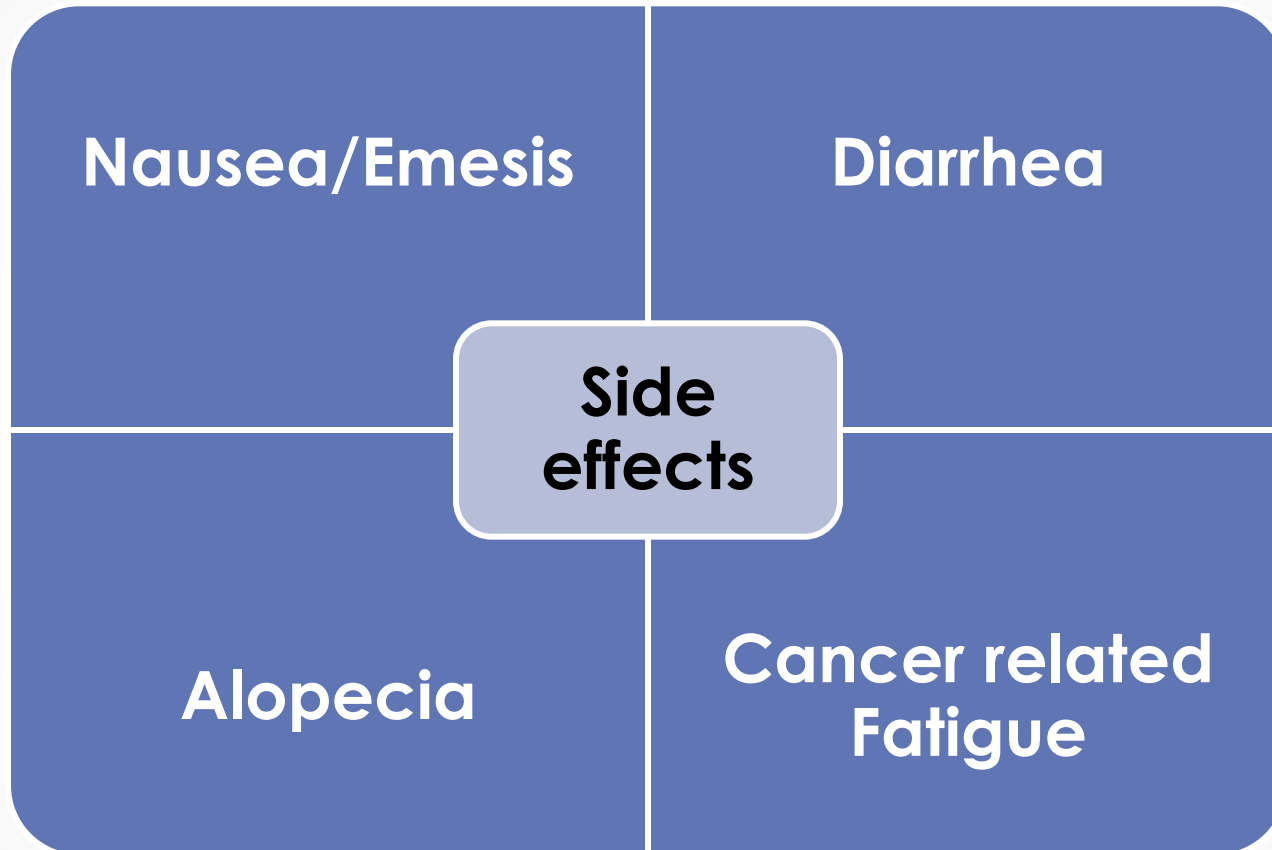
(vgl. Cataliotti, 2007, P. 665-666).

- BCN`s guide patients from the diagnosis, treatment and follow up
- BCN`s are working in a specialist Breast Care Center in a multidisciplinary team
- BCN`s are giving practical advice, emotional support, information about side effects of a cytostatic-, target-, endocrine- or radio therapy...

(vgl. Wilson, 2013, P. 3582,-3585).

Agenda

1. Definition BCN
2. Side effects of CDK 4/6 inhibitors
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Nausea/Emesis

- **CINV** – **C**hemotherapy **I**nduced **N**ausea and **E**mesis

(vgl. Menche & Keller, 2014, P.897).

- at different point of the therapy:
 - **acute**: direct after application or 24 hours later
 - **delayed**: more than 24 hours after application, can persist up to 5 days
 - **before** starting the therapy

(vgl. Margulies, 2017, P.372).

Diarrhea

- If **three or more bowel movements** are removed per day, which are **liquid, paste like** in consistency, this is called diarrhea.

(vgl. Pleyer, 2012, S.134; Wagner, 2016, P.30).

- **consequence:** Liquid- and Electrolyte Waste
- Stopping the diarrhea is important -> How?
 - black tea, bananas, blueberrys, rice,
 - prescribed medicaments e.g.

(vgl. Pleyer, 2012, S.134-135; Wagner, 2016, P.30)

Alopecia

- starts approximately **10** up to **28** days after beginning with the therapy
- not only head hairs, also Eyelashes and Eyebrows
- it is **reversible** – very important information for patients! – about **2 – 4 weeks** after ending the therapy the hairs starts growing
- Women are stressed – everyone sees that they are ill and get cytostatic therapy -> **Bodyimage disruption**

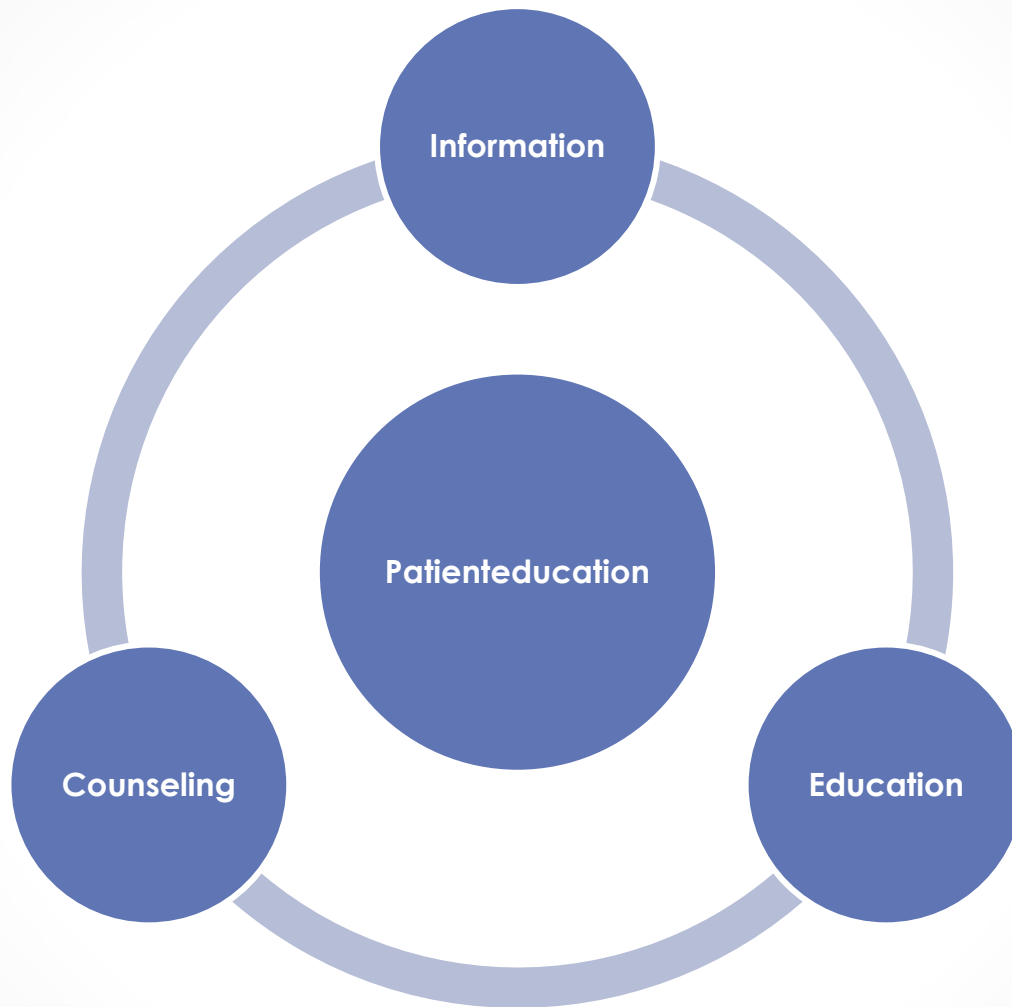
(vgl. Pleyer, 2012, P.147).

Cancer related Fatigue

- most common side effect in cancer treatment
- People feel stressed
- no improvement after sleeping
- can persist months or years after treatment
- People are restricted in their quality of life → can be a risk factor for reduced survival
- multi dimensional: physical, mental and emotional limitations
- no general treatment – physical activity can help
e.g. (vgl. Bower, 2014, P.597-609).

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Information

- most common part in practical work
- Goal: to extend the state of Knowledge and based on this knowledge patients can make their own decisions. (vgl. Pleyer, 2012, S.175; Smoliner, 2014, P.71).
- mostly given verbal, additional with booklets (vgl. Lauster et al., 2014, P.188; Kocks & Segmüller, 2012, P.178).
- e.g. side effects of a cytostatic Therapy

Education

- Educations are scheduled
- Knowledge will be given structured and in small steps (vgl. Smoliner, 2014, P.71).
- Goal: learn a special practice
- e.g. handling a colostoma

Counseling

- Patient and Nurse get in a dialog
- Working together on a problem, which the patient brings in (vgl. Peyer, 2012, P.175; London, 2010, P.57).
- requirements: voluntariness, low-threshold service, individuality, possibility to break up at any time (vgl. Schaeffer & Schmidt-Kaehler, 2012, P.70-71).
- Goal: help people to acquire knowledge -> on this they can make decisions -> problems can be detected early and interventions can be set (vgl. London, 2010, P.30).
- e.g. Fatigue Management

„Patienteninformations- und Beratungszentrum (PIZ)“

Private Hospital Rudolfinerhaus:

- founded in Oktober 2015
- near by the entrance of the hospital
- Topics: side effects, breast prosthesis, rehabilitation...
- lot of booklets and books, box with wig, breast prosthesis, bras, ...
- not only for patients, also for family members, friends, interested people outside of the hospital

Take Home Message

- Don't forget to take care of yourself!
- Don't forget to smile!
- Never stop learning!
- Love your job!



Cancer nursing is about maintaining dignity in the end of life situations, maintaining hope with patients and family and reducing pain. Cancer nursing is about respecting patient privacy, understand patient's needs, and fully understand the importance of integrity and empathy.

(Grube, 2013, P.115).

**Thank you
for your attention!**

Literature

- BOWER, Julianne E.: Cancer-related fatigue: Mechanism, risk factors, and treatments. In: Nat Rev Clin Oncol, 2014, S. 597-609.
- CATALIOTTI, L. u.a.: Guidelines on the standards for the training of specialised health professionals dealing with breast cancer. In: European Journal of cancer, 2007, Vol. 43, S. 660-675.
- GRUBE, Brigitte: The challenges of cancer nursing in Europe. In: Forum, 2013/Issue 2, Vol. 28, S.115-117.
- KOCKS, Andreas & SEGMÜLLER, Tanja: Patientenedukation – Beratung, Schulung, Information in der Pflege. In: SCHEWIOR-POPP, Susanne; SITZMANN, Franz; ULLRICH, Lothar: Thiemes Pflege. Das Lehrbuch für Pflegenden in Ausbildung. Thieme, 12.Aufl., Stuttgart, 2012, S.177-180.
- LAUSTER, Martina; DRESCHER, Anke; WIEDERHOLD, Dagmar; MENCHE, Nicole (Hg): Pflege Heute. Urban & Fischer, 6.Aufl., München, 2014.
- LONDON, Fran: No Time to Teach. Lippincott Williams & Wilkins, Philadelphia, New York, Baltimore, 1999. (deutsch von: ABT-ZEGELIN, Angelika & TOLSDORF Mareike (Hg): Informieren, Schulen, Beraten. Praxishandbuch zur pflegebezogenen Patientenedukation. Hans Huber, 2.Aufl., Bern, 2010.)
- MARGULIES, Anita; KRONER, Thomas; GAISSER, Andrea; BACHMANN-METTLER, Irène (Hg): Onkologische Krankenpflege. Springer, 6.Aufl., Berlin Heidelberg, 2017.
- MENCHE, Nicole & KELLER Christine: Pflege von Menschen mit hämatologischen und onkologischen Erkrankungen. In: LAUSTER, Martina; DRESCHER, Anke; WIEDERHOLD, Dagmar; MENCHE, Nicole (Hg): Pflege Heute. Urban & Fischer, 6.Aufl., München, 2014, S.884-887; 897 - 898.
- PLEYER, Christa (Hg): Onkologie. Verstehen - Wissen - Pflegen. Urban & Fischer, 1.Aufl., München, 2012.
- SCHAEFFER, Doris & SCHMIDT-KAEHLER, Sebastian (Hg): Lehrbuch Patientenberatung. Hans Huber, 2.Aufl., Bern, 2012.
- SMOLINER, Andrea: Die Umsetzung des Konzeptes Patienten- und Angehörigenedukation im Rudolfinerhaus. In: PLESSL-SCHORN, Barbara (Hg): Patienten- und Angehörigen-edukation. Aufgaben für Ausbildung und Praxis. Facultas, 1.Aufl., Wien, 2014, S. 71; 74-75.
- THILL, Marc & SCHMIDT, Marcus: Management of adverse events during cyclin-dependent kinase 4/6 (CDK 4/6) inhibitor-based treatment in breast cancer. In: Therapeutic Advances in Medical Oncology, 2018, S. 1-12.
- WAGNER, Veronika: Haare, Haut und Nägel. Zielgerichtete Krebstherapien: Nebenwirkungen lindern. In: ProCare, 2016/Issue 3, Vol. 21, S.28-31.
- WILSON, A.R.M. u.a.: The requirements of a Specialist Breast Centre. In: European Journal of cancer, 2013, Vol. 49, S. 3579-3587.