



# Knowledge for nurses: ADC updates in breast cancer

# Disclaimer

- *Unapproved products or unapproved uses of approved products may be discussed by the faculty; these situations may reflect the approval status in one or more jurisdictions*
- *The presenting faculty have been advised by touchIME to ensure that they disclose any such references made to unlabelled or unapproved use*
- *No endorsement by touchIME of any unapproved products or unapproved uses is either made or implied by mention of these products or uses in touchIME activities*
- *touchIME accept no responsibility for errors or omissions*

## A conversation between:



**Ms Nikolina Dodlek**

University Hospital Centre Osijek  
Osijek, Croatia



**Prof. Sherko Kümmel**

Kliniken Essen-Mitte gGmbH  
Essen, Germany



# Agenda

**Individualizing treatment strategies: HER2-directed ADCs in breast cancer**

**What to look out for: Side effects associated with HER2-directed ADCs in breast cancer**

**Real-world practice: Optimal strategies for managing patients with breast cancer treated with HER2-directed ADCs**



# Individualizing treatment strategies: HER2-directed ADCs in breast cancer

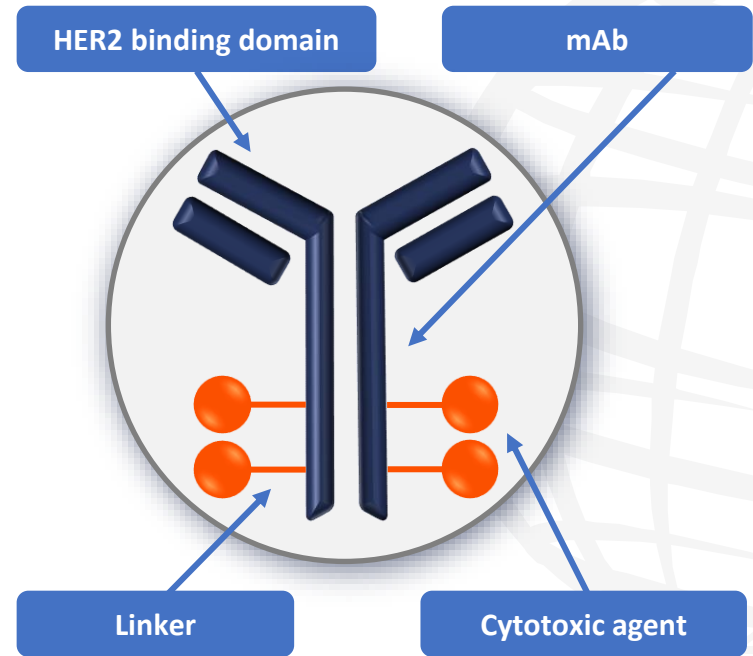
**Ms Nikolina Dodlek**

University Hospital Centre Osijek  
Osijek, Croatia



# HER2-directed ADCs are a promising strategy for BC

- HER2 is a cell surface receptor that plays a crucial role in cell growth and proliferation<sup>1</sup>
- The HER2 protein is overexpressed in 20–30% of BC cases<sup>2</sup>
- In patients with BC, amplification of HER2 is associated with an increased risk of recurrence and poor OS vs HER2-negative disease<sup>2</sup>
- These observations, together with cell surface accessibility of the HER2 extracellular domain, prompted development of HER2-directed antibody-based therapies<sup>1,2</sup>
- Trastuzumab is a HER2-directed mAb, frequently utilized in HER2-directed ADCs as a vehicle for selective delivery of a cytotoxic payload to HER2+ cancer cells<sup>1</sup>

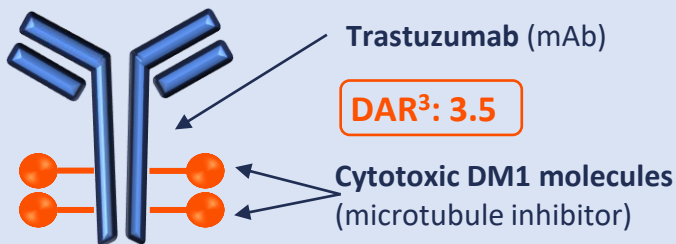


ADC, antibody–drug conjugate; BC, breast cancer; HER2, human epidermal growth factor receptor 2; mAb, monoclonal antibody; OS, overall survival.

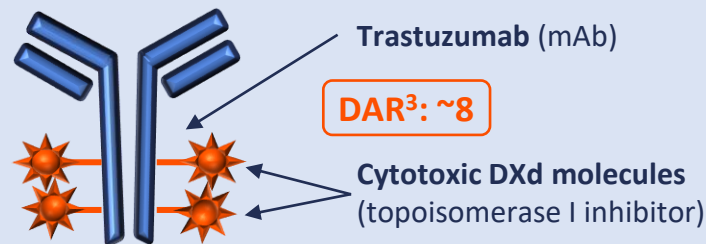
1. Mark C, et al. *Int J Mol Sci.* 2023;24:13726; 2. Zimmerman BS, Esteva FJ. *Cancers (Basel).* 2024;16:800.

# There are two EMA-approved HER2-directed ADCs for BC

## Trastuzumab emtansine (T-DM1)<sup>1</sup>



## Trastuzumab deruxtecan (T-DXd)<sup>2</sup>



## HER2-directed ADCs in clinical development<sup>4</sup>

### Trastuzumab duocarmazine (SYD985)



### ARX788



### Disitamab vedotin (RC48)



ADC, antibody–drug conjugate; BC, breast cancer; DAR drug–antibody ratio; EMA, European Medicines Agency; HER2, human epidermal growth factor receptor; mAb, monoclonal antibody.

1. EMA. Trastuzumab emtansine SmPC. Available at: <https://bit.ly/4avhuvl> (accessed 27 June 2024); 2. EMA. Trastuzumab deruxtecan SmPC. Available at: <https://bit.ly/3URZ2rd> (accessed 27 June 2024); 3. Liu F, et al. *J Cancer*. 2023;14:3275–84; 4. Zimmerman BS, Esteva FJ. *Cancers (Basel)*. 2024;16:800.

# What to look out for: Side effects associated with HER2-directed ADCs in breast cancer

**Ms Nikolina Dodlek**

University Hospital Centre Osijek  
Osijek, Croatia





# The safety profile of HER2-directed ADCs is generally manageable, but adverse reactions have been reported<sup>1,2</sup>

## T-DM1

UTI  
 Insomnia  
 Peripheral neuropathy  
**Haemorrhage**  
 Dry mouth  
 Arthralgia | Myalgia  
 Asthenia

## T-DXd

Upper RTI  
**Neutropenia** | Leukopenia | Lymphopenia  
 Hypokalaemia | ↓ appetite  
 Dizziness  
**ILD**  
 Alopecia  
 ↓ ejection fraction | ↓ weight

## Very common\* adverse reactions and special warnings



## T-DM1 and T-DXd

**Thrombocytopenia** | Anaemia  
 Headache  
 Epistaxis | Cough | Dyspnoea  
 Stomatitis | Diarrhoea | Vomiting |  
 Nausea | Constipation | Abdominal pain  
 ↑ transaminases  
 Musculoskeletal pain  
 Fatigue | Pyrexia

## Special warnings/precautions<sup>†</sup>

### T-DM1

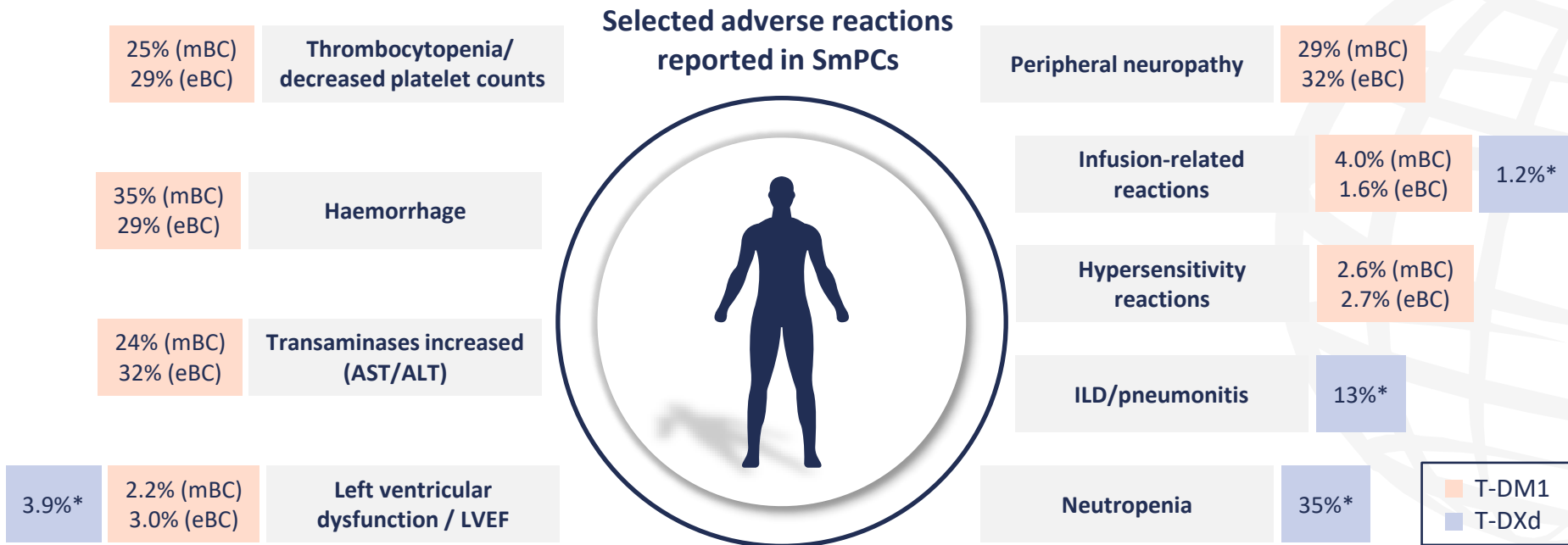
↓ LVEF  
 ILD/pneumonitis  
 Neurotoxicity  
 Hepatotoxicity  
 IRR | hypersensitivity | IJR

### T-DXd

↓ LVEF  
 ILD/pneumonitis  
 Embryo-foetal toxicity

\*Possibly affecting ≥1/10 people, as listed in the SmPC, and reported for recommended doses. †Not necessarily very common. Boxed adverse reactions are special warnings/precautions. ADC, antibody–drug conjugate; HER2, human epidermal growth factor receptor 2; IJR, injection-site reactions; ILD, interstitial lung disease; IRR, infusion-related reactions; LVEF, Left ventricular ejection fraction; RTI, respiratory tract infection; T-DM1, Trastuzumab emtansine; T-DXd, Trastuzumab deruxtecan; UTI, urinary tract infection. 1. EMA. Trastuzumab emtansine SmPC. Available at: <https://bit.ly/4avhuvl> (accessed 27 June 2024); 2. EMA. Trastuzumab deruxtecan SmPC. Available at: <https://bit.ly/3URZ2rd> (accessed 27 June 2024).


# Adverse reactions associated with HER2-directed ADCs have been reported across multiple clinical trials<sup>1,2</sup>



\*Proportion of patients receiving the recommended dose of 5.4 mg/kg and experiencing adverse reactions.

ADC, antibody–drug conjugate; ALT, alanine transaminase; AST, aspartate aminotransferase; BC, breast cancer; eBC, early BC; HER2, human epidermal growth factor receptor 2; ILD, interstitial lung disease; LVEF, Left ventricular ejection fraction; mBC, metastatic BC; T-DM1, Trastuzumab emtansine; T-DXd, Trastuzumab deruxtecan.

1. EMA. Trastuzumab emtansine SmPC. Available at: <https://bit.ly/4avhuvl> (accessed 27 June 2024); 2. EMA. Trastuzumab deruxtecan SmPC. Available at: <https://bit.ly/3URZ2rd> (accessed 27 June 2024).



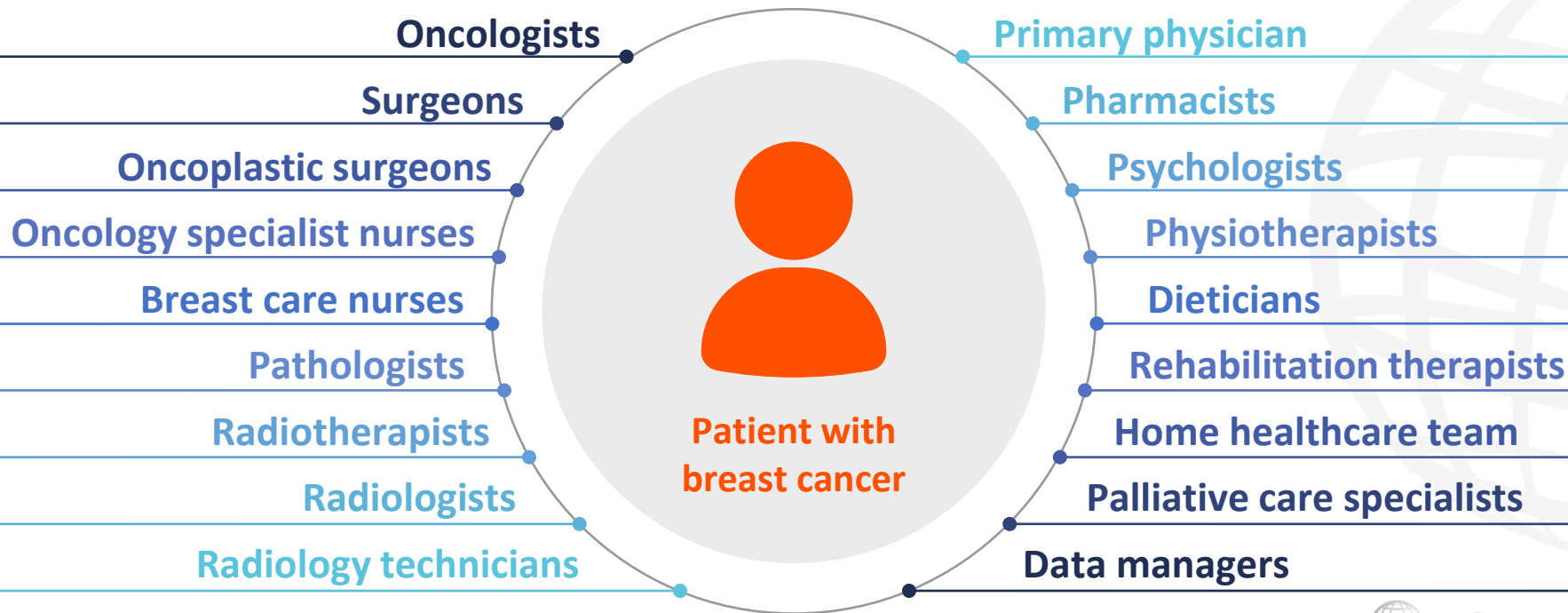
# Real-world practice: Optimal strategies for managing patients with breast cancer treated with HER2-directed ADCs

**Prof. Sherko Kümmel**

Kliniken Essen-Mitte gGmbH  
Essen, Germany



# A multidisciplinary team is essential for effective breast cancer care<sup>1-4</sup>



1. Gennari A, et al. *Ann Oncol.* 2021;32:1475–95; 2. Sena B, De Luca E. *Acta Biomed.* 2021;92:e2021506; 3. Naito T. *Asia Pac J Oncol Nurs.* 2024;11:100370; 4. Breast Cancer Now. The multidisciplinary team (MDT). Available at: <https://bit.ly/3yoeILb> (accessed 27 June 2024).

# Breast care nurses provide a continuum of care throughout patients' breast cancer journey<sup>1</sup>



Oncology nurses are at the forefront of cancer care and can act as the hub of the multidisciplinary team<sup>2</sup>

## Clinical support

- Patient assessment<sup>3</sup>
- Outcome evaluation<sup>3,4</sup>
- Screen for and manage TEAEs<sup>5</sup>
- Symptom assessment, monitoring and management<sup>4</sup>
- Clinical interventions (e.g. wound dressing, seroma aspiration, drain removal, chemotherapy)<sup>1</sup>

## Patient support

- Disease and treatment education<sup>1,3,4</sup>
- Support shared decision making<sup>2,3</sup>
- Physical and emotional support<sup>1,3</sup>
- Psychological support<sup>3,4</sup>
- Patient advocacy<sup>1,4</sup>
- Health promotion<sup>3</sup>
- Counselling<sup>1</sup>

## Care coordination

- Pivotal patient–provider point of contact<sup>1,3</sup>
- Information sharing with the MDT<sup>4</sup>
- Coordinate diagnostic procedures, surgery, medical, radio-oncology appointments<sup>1</sup>
- Liaise with primary physicians, psychosocial services, dieticians, social workers<sup>1</sup>

## Community support

- Presenting to:<sup>1</sup>
  - Breast cancer patient groups
  - Cancer volunteers
  - Hospital staff
  - Local high schools
  - Women in the community<sup>1</sup>
- Breast cancer promotion<sup>1</sup>

MDT, multidisciplinary team; TEAE, treatment-emergent adverse event.

1. Luck L, et al. *J Clin Nurs*. 2017;26:3422–29; 2. Naito T. *Asia Pac J Oncol Nurs*. 2024;11:100370; 3. Rowett KE, Christensen D. *Clin J Oncol Nurs*. 2020;24:24–31;

4. Tariman JD, Szubski KL. *Clin J Oncol Nurs*. 2015;19:548–56; 5. Gennari A, et al. *Ann Oncol*. 2021;32:1475–95.