# Patientinnentag 2019 AGAPLESION MARKUS KRANKENHAUS

Welche Daten sind für Sie aus dem letzten Jahr relevant?

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### KATHERINE (Phase III) – Study Design

T-DM1 vs. Trastuzumab (postneo-)adjuvant beim HER2+ Mammakarzinom und invasivem Tumorrest nach neoadjuvanter Chemotherapie



- cT1–4/N0-3/M0 at presentation (cT1a–b/N0 excluded)
- Received neoadjuvant therapy consisting of
  - Minimum of 6 cycles of chemotherapy
    - All chemotherapy as neoadjuvant therapy
    - Minimum of 9 weeks of Taxane
    - Anthracyclines and alkylators allowed
  - Minimum of 9 weeks of Trastuzumab
    - Second HER2-targeted agent allowed
- Pathologic residual invasive tumor in breast or axilla
- Randomization within 12 weeks of surgery

### **Stratification factors:**

- Clinical presentation: Inoperable (stage cT4 or cN2–3) vs. operable (stages cT1–3N0–1)
- Hormone receptor: ER or PR positive vs. ER negative and PR negative/unknown
- Preoperative therapy: Trastuzumab vs. Trastuzumab plus other HER2-targeted therapy
- Pathological nodal status after neoadjuvant therapy: Positive vs. negative/not done



- Radiation and endocrine therapy per protocol and local guidelines
- Switch to Trastuzumab permitted if T-DM1 discontinued due to AEs

### KATHERINE (Phase III) – IDFS (Primary Endpoint)

T-DM1 vs. Trastuzumab (postneo-)adjuvant beim HER2+ Mammakarzinom und invasivem Tumorrest nach neoadjuvanter Chemotherapie



Patient-reported outcomes from KATHERINE: a phase III study of adjuvant trastuzumab emtansine (T-DM1) vs trastuzumab in patients with residual invasive disease after neoadjuvant therapy for HER2-positive breast cancer

Schneeweiss A et al. Poster Session – Breast Cancer – Local/Regional/Adjuvant Abstract No. 513

# KATHERINE – PRO Results: Clinically Meaningful Deterioration at ANY Assessment

 There were small differences in frequency of clinically meaningful deterioration between treatment arms at some time points. However these generally did not persist and were no longer apparent at the 6 month follow-up



Mod. Schneeweiss A et al. ASCO 2019, Poster Session – Breast Cancer – Local/Regional/Adjuvant, Abstract No. 513

Event-free survival analysis of the prospectively randomized phase III ETNA study with neoadjuvant nab-paclitaxel (*nab*-P) versus paclitaxel (P) both followed by anthracycline regimens in women with HER2negative high-risk breast cancer. A Michelangelo study in collaboration with GECAM and BCRC-WA

Gianni L et al. Poster Session – Breast Cancer – Local/Regional/Adjuvant Abstract No. 515

### ETNA (Phase III) – Study Design

*nab*-Paclitaxel vs. Pac  $\rightarrow$  A(E)C/FEC als neoadj. CT beim HER2– EBC (N=695)



\*Estrogen receptor, progesterone receptor, HER2 and Ki67 were centrally assessed before randomization

### ETNA (Phase III) – pCR, EFS

*nab*-Paclitaxel vs. Pac  $\rightarrow$  A(E)C/FEC als neoadj. CT beim HER2– EBC (N=695)



Overall: P vs. *nab*-P –3.9 (–9.9–2.1); Odds ratio: 0.77 (0.52–1.13); p value 0.186

Phase III MONALEESA-7 Trial of Premenopausal Patients With HR+/HER2- Advanced Breast Cancer Treated With Endocrine Therapy ± Ribociclib: Overall Survival Results

Hurvitz SA et al. Oral Abstract Session – Breast Cancer – Metastatic Abstract No. LBA1008

### MONALEESA-7 – Study Design



<sup>a</sup>Patients who received ≤14 days of NSAI/TAM ± GOS were allowed. <sup>b</sup>Stratified by liver/lung metastasis (yes/no), prior chemotherapy (yes/no), and combination partner (NSAI/TAM). TAM or NSAI were administered daily orally. TAM dose was 20 mg, LET dose was 2.5 mg, ANA dose was 1 mg <sup>c</sup>GOS & for the combination partner (NSAI/TAM). TAM or NSAI were administered daily orally. TAM dose was 2.0 mg, LET dose was 2.5 mg, ANA dose was 1 mg <sup>c</sup>GOS & for the combination partner (NSAI/TAM). TAM or NSAI were administered daily orally. TAM dose was 2.0 mg, LET dose was 1 mg <sup>c</sup>GOS & for the combination partner (NSAI/TAM). TAM dose was 2.0 mg, LET dose was 2.0 mg, LET dose was 1 mg <sup>c</sup>GOS & for the combination partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM). Tam to definitive deterioration partner (NSAI/TAM). TAM dose was 1 mg <sup>c</sup>GOS & for the combinetion partner (NSAI/TAM) were administered to the combinetion partner (NSAI/TAM). Tam to definitive deterioration partner (NSAI/TAM) were administered to the combinetion partner (NSAI/TAM). Tam to definitive deterioration partner (NSAI/TAM) were administered to the combinetion partner (NSAI/TAM) were administered to the combinetion partner (NSAI/TAM). Tam to definitive deterioration partner (NSAI/TAM) were administered to the combinetion partner (NSAI/TAM) were a

### MONALEESA-7 – Results

### Signifikant längeres OS mit RIB + ET vs. PBO + ET

- Median follow-up 34.6 mo (min 28.0 mo); OS was evaluated after 192 deaths (RIB: n=83; PBO: n=109)
- Significantly longer OS with RIB + ET vs. PBO + ET (median not reached vs. 40.9 mo; 95% CI 37.80 mo-not evaluable; HR 0.712; 95% CI 0.54–0.95; p=0.00973). The result crossed the prespecified stopping boundary for superior efficacy
- Estimated OS rates at 42 mo: 70.2% vs. 46.0%
- In pts who received an NSAI (n=495), RIB + ET demonstrated a consistent OS improvement vs. PBO + ET (HR 0.699; 95% CI 0.50–0.98)
- Posttreatment therapy use was balanced between treatment arms (RIB: 68.9%; PBO: 73.2%)
- At cutoff, 173 pts were continuing study treatment (RIB, n=116; PBO, n=57)

### MONALEESA-7 – Conclusion

## Erstmals OS Vorteil für einen CDK4/6-Inhibitor zur initialen endokrin-basierten Therapie in der Prämenopause gezeigt

 RIB + ET führte zu einem statistisch signifikant längeren OS vs. ET alleine bei prämenopausalen Frauen mit HR+/HER2–ABC

### PALOMA-3\* – Study Design<sup>1</sup>



 Sensitivity to prior hormonal therapy was defined as documented clinical benefit (CR, PR, or SD ≥24 weeks) to ≥1 prior hormonal therapy regimen in the metastatic setting or ≥24 months of adjuvant hormonal therapy before recurrence.

AI, aromatase inhibitor; CR, complete response; IM, intramuscular; PR, partial response; Q4W, once every 4 wk; QD, once daily; SD, stable disease. \*Clinicaltrials.gov, NCT01942135; ‡Administered on days 1 and 15 of cycle 1, then on day 1 of every cycle thereafter. <sup>1</sup>Turner et al. New Engl J Med. 2015.

### PALOMA-3 – Efficacy results

### **Overall survival by subgroups**

Subgroup	Patients, n (%)		HR (95% CI)	PAL+FUL Median OS (95% CI)	PBO+FUL Median OS (95% CI)	Interaction p value
All randomized patients, ITT, stratified	521 (100)	<b>⊢ ₩</b> - ₩	0.81 (0.64-1.03)	34.9 (28.8-40.0)	28.0 (23.6-34.6)	
All randomized patients, ITT, unstratified	521 (100)	<b>⊢</b>	0.79 (0.63-1.00)	34.9 (28.8-40.0)	28.0 (23.6-34.6)	
Sensitivity to previous hormonal therapy*						0.12
Yes	410 (78.7)	⊢-≣∔	0.72 (0.55-0.94)	39.7 (34.8-45.7)	29.7 (23.8-37.9)	
No	111 (21.3)		1.14 (0.71-1.84)	20.2 (17.2-26.4)	26.2 (17.5-31.8)	
Site of metastatic disease*						0.44
Visceral	311 (59.7)	┝╌╄═╌┥	0.85 (0.64-1.13)	27.6 (24.4-31.2)	24.7 (20.8-31.8)	
Nonvisceral	210 (40.3)	⊢_ <del></del>	0.69 (0.46-1.04)	46.9 (39.3-NE)	35.4 (24.6-NE)	
Menopausal status at study entry*						0.25
Pre/peri	108 (20.7)	⊢÷¦∎−−−−−	1.07 (0.61-1.86)	38.0 (24.4-NE)	38.0 (22.2-NE)	
Post	413 (79.3)	┝━╋╬━┥	0.73 (0.57-0.95)	34.8 (28.8-40.1)	27.1 (22.8-32.1)	
Prior chemotherapy						0.66
Metastatic treatment	177 (34.0)		0.91 (0.63-1.32)	25.6 (21.4-30.1)	26.2 (20.0-37.5)	
None	130 (25.0)		0.68 (0.41-1.15)	46.2 (36.5-NE)	29.7 (22.8-NE)	
Prior lines of therapy in metastatic setting						0.88
0	114 (21.9)	┝──╋┼╌┼┙	0.70 (0.43-1.14)	36.1 (27.6-43.7)	24.7 (19.5-34.6)	
1	225 (43.2)	┝──╬╋╾┼──┥	0.86 (0.60-1.22)	38.0 (27.2-46.5)	33.8 (23.5-41.4)	
2	131 (25.1)		0.76 (0.48-1.22)	30.0 (23.0-40.1)	24.3 (20.0-29.7)	
≥3	51 (9.8)		0.64 (0.29-1.40)	34.8 (26.1-NE)	27.1 (5.3-NE)	
ESR1 mutation status <sup>†</sup>						0.60
Positive	106 (20.3)	┝──╋┼┼┥	0.69 (0.43-1.12)	35.6 (23.6-42.0)	24.6 (19.7-33.0)	
Negative	289 (55.5)	┝──┼╋╌┼╌┥	0.85 (0.61-1.19)	36.5 (28.0-43.1)	31.8 (22.8-39.1)	
PIK3CA mutation status <sup>+</sup>						0.64
Positive	133 (25.5)		0.74 (0.48-1.14)	28.6 (25.3-39.3)	22.2 (15.7-29.5)	
Negative	262 (50.3)		0.84 (0.59-1.18)	38.8 (28.9-44.5)	33.0 (24.3-41.6)	
	-	0.25 0.50 0.75 1.00 1.25 1.50 1.75 2.00				

In favor of PAL+FUL In favor of PBO+FUL

ESR1, estrogen receptor 1; NE, not estimable; PIK3CA, phosphatidylinositol 3-kinase, catalytic subunit alpha. \*Prespecified stratification factors. †ESR1 and PIK3CA data were from a subset of patients who had circulating tumor DNA samples and who were tested for the mutations. *IMpassion130*: updated OS from a global, randomized, double-blind, placebo-controlled, Phase III study of atezolizumab + *nab*-paclitaxel in previously untreated locally *advanced or metastatic TNBC* 

Schmid P et al. Oral Abstract Session – Breast Cancer – Metastatic (discussed by: Santa-Maria CA)

Abstract No. 1003

### IMpassion130 – Study Design



- Co-primary endpoints in ITT and PD-L1 IC+: PFS and OS<sup>d</sup>
- Pre-specified hierarchical testing of OS in ITT and, if significant, in PD-L1 IC+ patients
- In both treatment arms, 41% of patients were PD-L1 IC+

<sup>a</sup>Prior chemotherapy in the curative setting allowed if treatment-free interval ≥12 months. <sup>b</sup>28-day cycle. <sup>c</sup>Centrally evaluated per VENTANA SP142 IHC assay. <sup>d</sup>Efficacy endpoints assessed by investigators per RECIST 1.1. NCT02425891. RECIST, Response Evaluation Criteria in Solid Tumors.

### IMpassion130 – Background Atezolizumab and Chemotherapy



- Atezolizumab (anti-PD-L1) monotherapy is approved in the United States, Europe and elsewhere for certain types of metastatic urothelial carcinoma and lung cancer<sup>4</sup>
- In a Phase I study, Atezolizumab monotherapy was active in multiple cancers, including TNBC,<sup>5,6</sup> with greater activity in patients whose tumours had PD-L1 IC ≥ 1%<sup>6</sup>
- The addition of chemotherapy can enhance Atezolizumab's anti-tumour activity<sup>7,8</sup>
  - In a Phase Ib study in mTNBC, concurrent administration of nab-Paclitaxel did not inhibit Atezolizumab-mediated immunodynamic effects<sup>8</sup>

DC, dendritic cell 1Chen Immunity 2013. 2Zitvogel Immunity 2013. 3Emens CIR 2015 4TECENTRIQ US PI/SmPC 2018. 5Herbst Nature 2014. 6Emens JAMA Oncol 2018. 7Jotte ASCO 2018. 8Pohlmann AACR 2018

### IMpassion130 – Primary PFS Analysis ITT and PD-L1 IC+ Subgroup

**ITT Population** PD-L1 IC+ Subgroup 100 -100 HR, 0.80 (95% CI: 0.69, 0.92) HR, 0.62 (95% CI: 0.49, 0.78) p=0.002 p<0.001 80 80 A + nab-P (n=451) – A + *nab*-P (n=185) PFS (%) 60 60 PFS (%) 40 40 20 20 5.5 mo 7.2 mo 5.0 mo 7.5 mo 0 ∣ (5.3, 5.6) 0 - (3.8, 5.6) (5.6, 7.5)(6.7, 9.2)33 12 24 27 30 3 24 27 30 33 Ω 3 9 15 18 21 0 12 21 15 Time (months) Time (months)

- PFS benefit driven by PD-L1 IC+ patients, as a treatment effect was not observed in PD-L1 IC- patients<sup>1</sup>
- Based on these data,<sup>2</sup> Atezolizumab + nab-Paclitaxel received accelerated approval by the FDA<sup>3</sup> and is recommended for patients with PD-L1 IC+ mTNBC in the NCCN<sup>4</sup> and AGO<sup>5</sup> guidelines

A, Atezolizumab; HR, hazard ratio; *nab*-P, *nab*-Paclitaxel; P, Placebo. Data cutoff: April 17, 2018. Median follow-up (ITT): 12.9 months. 1. Emens SABCS 2018. 2. Schmid *New Engl J Med.* 2018. 3. Tecentriq (Atezolizumab) [package insert]. South San Francisco, CA: Genentech USA, Inc; 2019 4. NCCN Clinical Practice Guidelines. Breast Cancer. V1.2019. 5. AGO Guidelines Breast Version 2019.1.

### IMpassion130 – OS in PD-L1+ Population



<sup>a</sup>Not formally tested due to pre-specified hierarchical analysis plan. Clinical cutoff date: January 2, 2019. Median PFS (95% CI) is indicated on the plot. Median FU (ITT): 18.0 months.

### IMpassion130 – Conclusion

Klinisch relevanter OS Vorteil unter Atezo + nab-Paclitaxel in der 2.
IMpassion130-Analyse bei nicht-vorbehandelten PD-L1+ mTNBC-Patienten

### IMpassion130 – Results

### Immune-Mediated AESI<sup>a</sup> Requiring Systemic Corticosteroids

Rash and pneumonitis were the only AESI requiring systemic corticosteroid use in ≥10 patients in the Atezolizumab + *nab*-Paclitaxel arm.



<sup>a</sup>Grouped MeDRA preferred terms.

