

CANCER DU SEIN METASTATIQUE

RH+ HER2-

CAS CLINIQUE



Dr Fanny LE DU

LIENS D'INTÉRÊT

	Consulting/ Advisory Board	Speaker/ Conferences	Research grants (Institutional Grant)	Travel fees
Amgen		X		
Daiichi / AZ	X	X	X	X
Lilly	X	X		X
Seagen	X	X		X
Novartis	X	X		X
Pierre Fabre		X		X
Pfizer	X			X
Roche	X			
Gilead	X	X		X
Myriad/ ExactSciences	X			

« L'intervenant déclare qu'il a été sollicité à la demande des laboratoires Novartis pour intervenir en tant qu'expert »

CAS CLINIQUE #1

Jeanne, née en 1941 (78 ans)

Veuve, vit à Rennes, conduit encore, isolée, quelques troubles de mémoire

ATCD :

- HTA
- Diverticulose

Traitements en cours : Valsartan/hydrochlorothiazide, Trimetazidine, Bisoprolol, Acide acétylsalicylique, Paracétamol.

1999 : CARCINOME CANALAIRE INFILTRANT T2 (24mm) N0 (0/13) du sein gauche, SBRI, RE 100%, RP 80%

- Tumorectomie + curage axillaire
- Radiothérapie adjuvante
- TAMOXIFENE pendant 5 ans

2019 : Découverte de METASTASES asymptomatiques osseuses et hépatiques multiples dans le cadre d'une rechute locale clinique avec CA15.3 élevé à 500 (PS 0, 44 kg/1.50 m, SC 1.36)

- Biopsie mammaire : ER+ 100% PR 0%, HER2- (score 1+), Ki67 20%

CAS CLINIQUE #1

Quels traitements de LI envisager chez cette patiente ?

HT (Anti-aromatase – Fulvestrant) en monothérapie

HT (Anti-aromatase – Fulvestrant) – CDK4/6i

Chimiothérapie par CAPECITABINE

Chimiothérapie par PACLITAXEL

CAS CLINIQUE #1

G8 = 10

- Pas de perte de poids +2 ni d'appétit +3
- Sort de chez elle +2
- Quelques doutes sur troubles cognitifs modérés +1
- IMC 19.6 +1
- Traitement :
valsartan/hydrochlorothiazide, trimetazidine,
bisoprolol, acide acétylsalicylique,
paracétamol +0
- Etat de santé jugé « aussi bien » que les autres +1
- > 85 +0

Carey = 5

- Femme +0
 - >80 +2
 - Pas de difficulté pour toilette +0
 - Pas de difficulté pour courses +0
 - Difficulté pour marche prolongée +2
 - Difficulté pour tirer ou pousser de gros objets +1
- Mortalité à 2 ans 12%

CAS CLINIQUE #1

Quelle place pour la CHIMIOTHERAPIE en 1ère ligne ?

RIGHT

Premenopausal patients

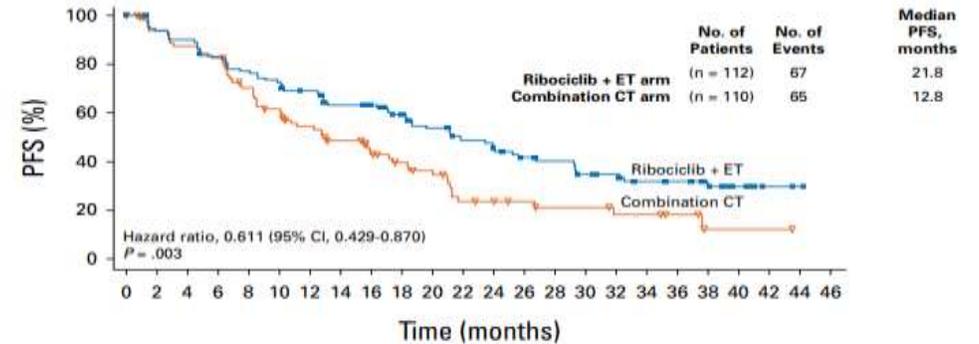
- RH+ HER2-
- Critères d'agressivité (métastases viscérales symptomatiques, progression rapide ou en "crise viscérale", métastases non viscérales très symptomatiques)
- Nécessitant, selon l'investigateur, une polychimiothérapie.

R
1:1
n = 222

AA + Goséreléline +
RIBOCICLIB

Polychimiothérapie
(docétaxel-capécitabine,
paclitaxel-gemcitabine,
vinorelbine-capécitabine)

A



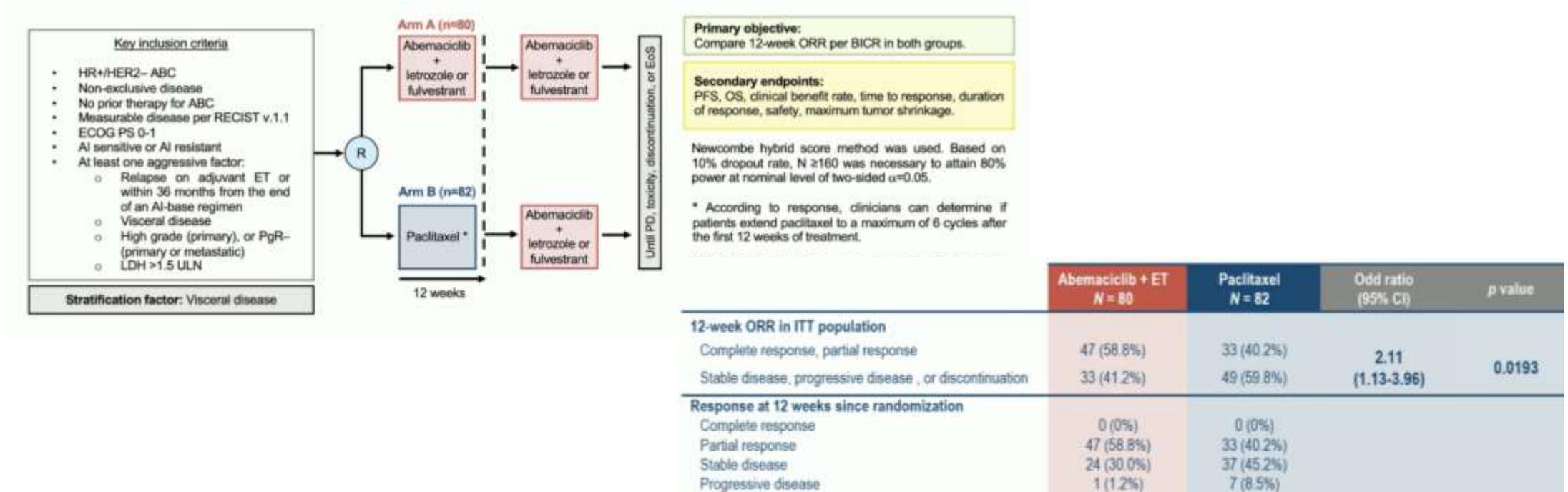
No. at risk	0	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44	46
Ribociclib + ET arm	112	103	99	90	84	79	73	65	63	55	48	41	39	32	30	25	23	19	17	13	6	2	1	0
Combination CT arm	110	90	84	79	63	54	46	38	29	24	21	13	12	10	8	8	6	6	4	1	1	1	0	0

CAS CLINIQUE #1

Quelle place pour la CHIMIOThERAPIE en 1ère ligne ?

ABIGAIL

Median age 57 (26-82)
70% postménopausal



CAS CLINIQUE #1

Quels traitements de LI envisager chez cette patiente ?

HT (Anti-aromatase – Fulvestrant) en monothérapie

HT (Anti-aromatase – Fulvestrant) – CDK4/6i

Chimiothérapie ~~CAPECITABINE~~

Chimiothérapie ~~PACLITAXEL~~

CAS CLINIQUE #1

Quelle place pour les CDK4/6i en 1ère ligne ?

L1

Study	CDK4/6 inhibitor	Endocrine therapy	Line	Menopausal status	Median FUP (PFS)	HR PFS (95% CI)	Median PFS (CDK4/6i)	Median PFS (Placebo)	Median FUP (OS)	HR OS (95% CI)	Median OS (CDK4/6i)	Median OS (Placebo)
PALOMA-2 ^{13,23}	Palbociclib	Letrozole	1st line	Post- menopausal	37.5 m	0.563 (0.461-0.687)	27.6 m	14.5 m	90.0 m	0.956 (0.777-1.177)	53.9 m	51.2 m
MONALEESA-2 ^{5,24}	Ribociclib	Letrozole	1st line	Post-menopausal	26.4 m	0.568 (0.457-0.704)	25.3 m	16.0 m	79.2 m	0.760 (0.630-0.930)	63.9 m	51.4 m
MONALEESA-7 ^{7,25}	Ribociclib	Tamoxifen/ NSAI + Goserelin (after chemotherapy)	1st or 2nd line	Pre-menopausal	19.2 m	0.553 (0.441-0.694)	23.8 m	13.0 m	53.5 m	0.763 (0.608-0.956)	58.7 m	48.0 m
MONARCH-3 ^{15,26,27}	Abemaciclib	NSAI	1st line	Post-menopausal	39.3 m	0.525 (0.415-0.665)	28.2 m	14.8 m	70.2 m	0.754 (0.584-0.974)	67.1 m	54.5 m

FUP = follow-up. PFS = progression-free survival. OS = overall survival. HR = hazard ratio. m = months. ET = endocrine therapy.

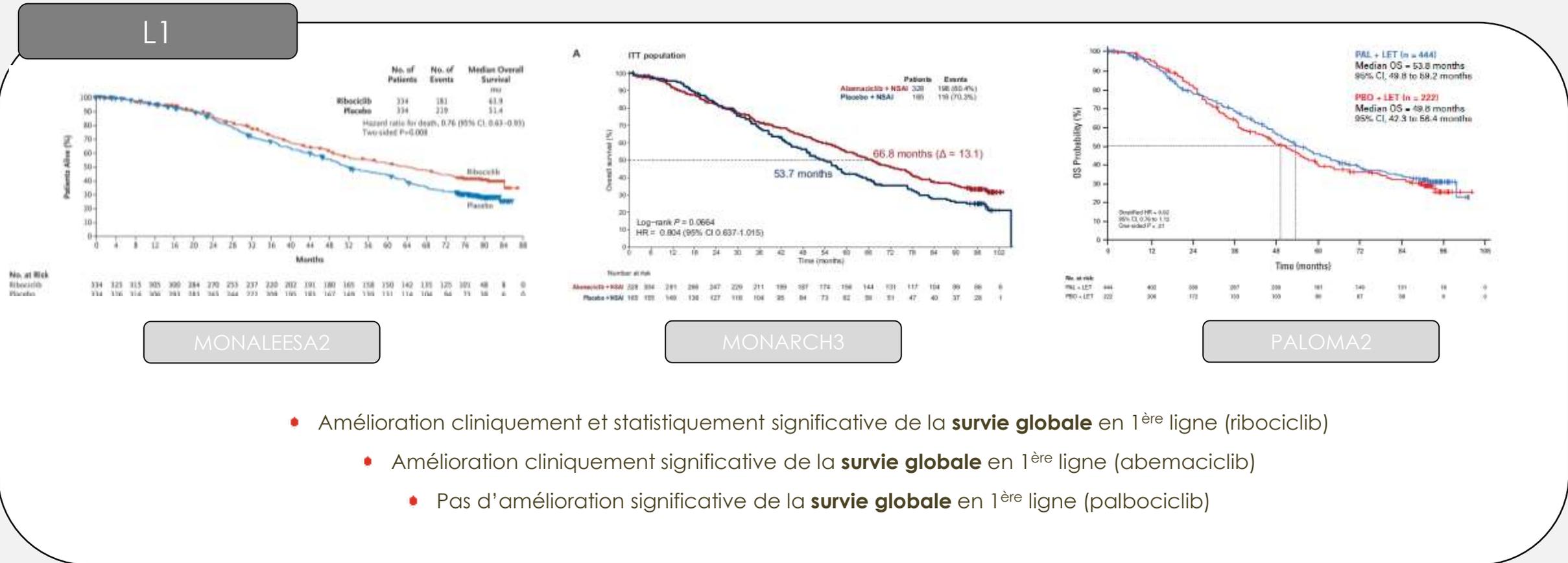
Table 1: Characteristics of studies included in the primary analysis.

- Résultats remarquables et cliniquement significatifs en **PFS**
- Standard dans les **cancers du sein avancés RE+ 1ère ligne**
- Profils de tolérance permettant une préservation de la QoL

CAS CLINIQUE #1

Quelle place pour les CDK4/6i en 1ère ligne ?

L1



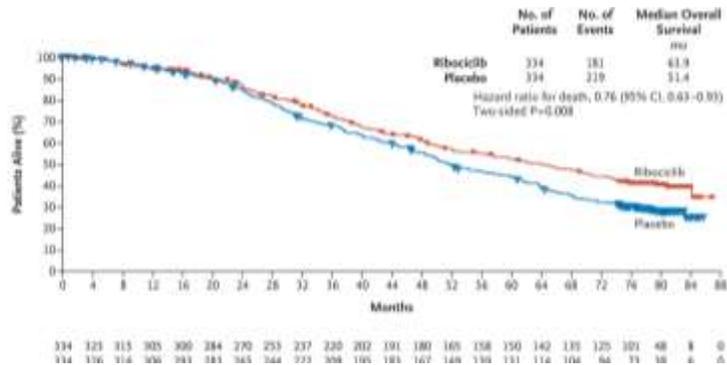
- Amélioration cliniquement et statistiquement significative de la **survie globale** en 1^{ère} ligne (ribociclib)
 - Amélioration cliniquement significative de la **survie globale** en 1^{ère} ligne (abemaciclib)
 - Pas d'amélioration significative de la **survie globale** en 1^{ère} ligne (palbociclib)

CAS CLINIQUE #1

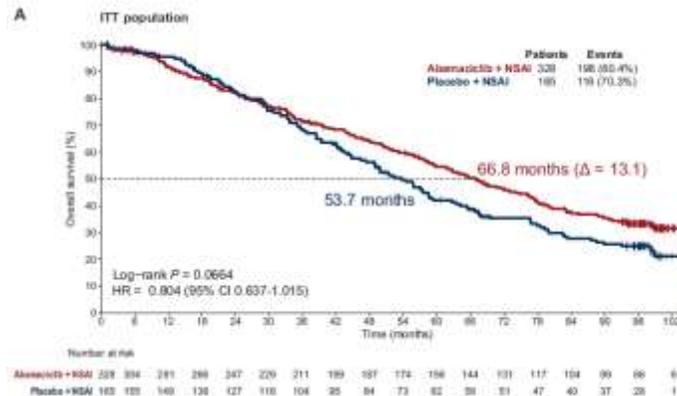
Quelle place pour les CDK4/6i en 1ère ligne ?

Profils de tolérance

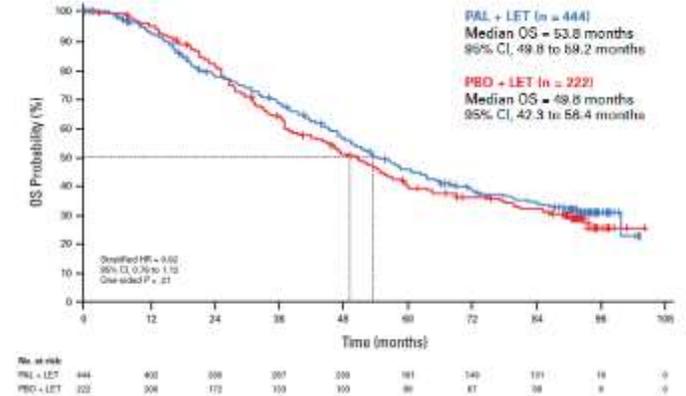
L1



MONALEESA2



MONARCH3



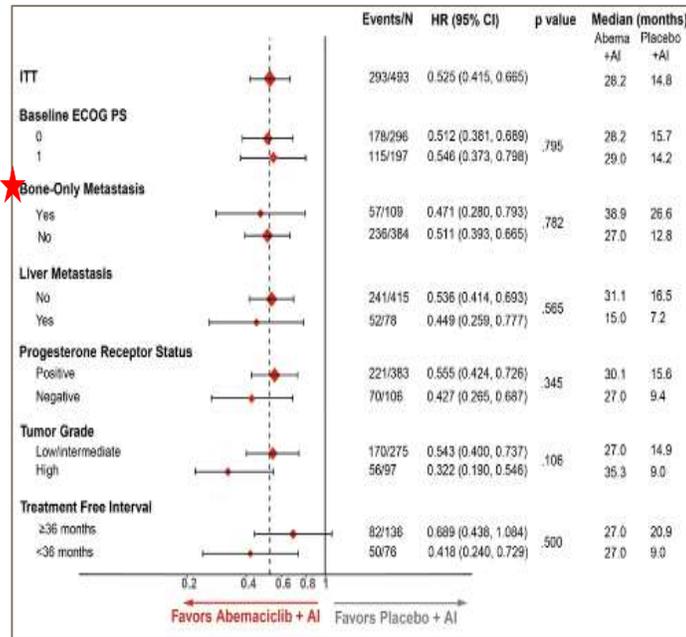
PALOMA2

- Amélioration cliniquement et statistiquement significative de la **survie globale** en 1ère ligne (ribociclib)
- Amélioration cliniquement significative de la **survie globale** en 1ère ligne (abemaciclib)
- Pas d'amélioration significative de la **survie globale** en 1ère ligne (palbociclib)

CAS CLINIQUE #1

Il y a-t-il un sous-groupe qui ne bénéficierait pas des CDK4/6i ?

MONARCH3



Bénéfice en PFS dans tous les **sous-groupes cliniques**

MONALEESA7



Bénéfice en PFS dans tous les **sous-groupes biologiques ou moléculaires** (excepté peut être les BL PAM50)

Johnston et al. Npj breast cancer 2021
 *MONALEESA2 Hortobagyi et al. NEJM 2022
 *MONALEESA7 Johnston et al. Npj breast cancer 2021

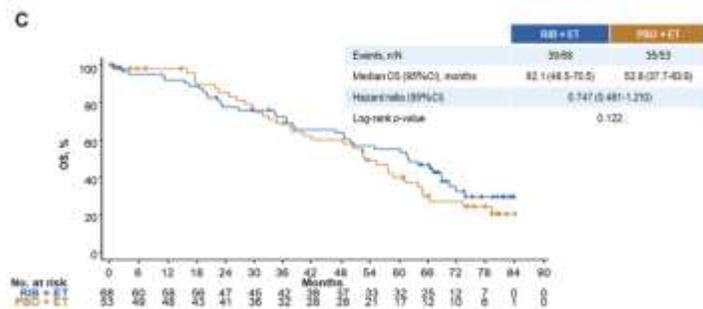
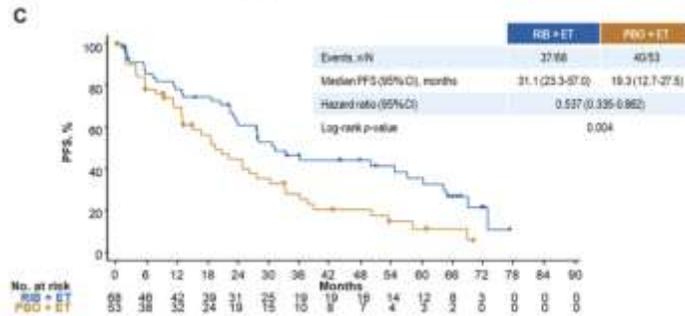
Bardia et al. JCO Prec Onco 2021

CAS CLINIQUE #1

Quid de la population âgée ?

MONALEESA 2,3 et 7

>75ans

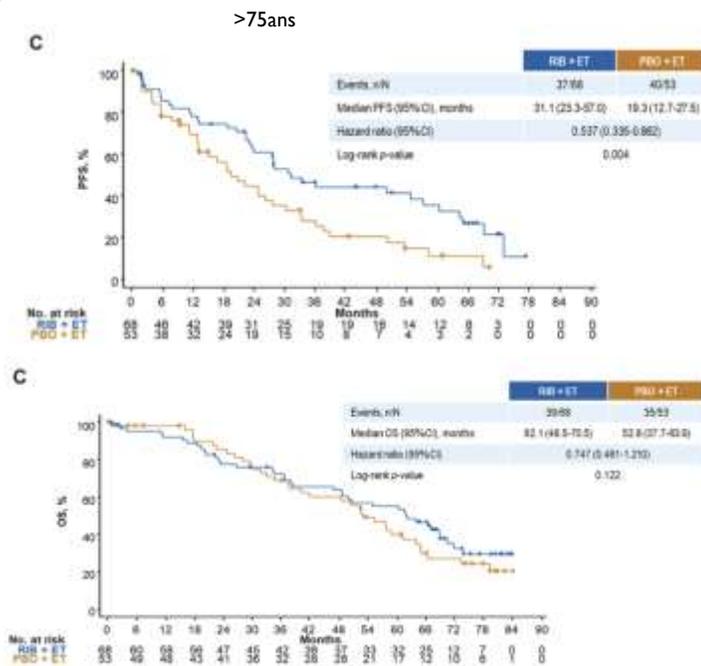


Bénéfice en PFS dans tous les **sous-groupes**
quel que soit l'âge

CAS CLINIQUE #1

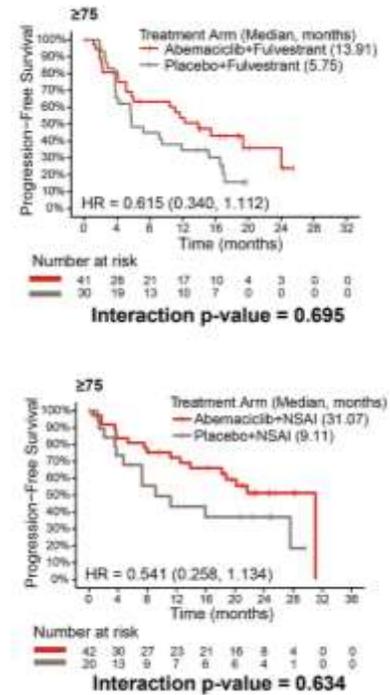
Quid de la population âgée ?

MONALEESA 2,3 et 7



Bénéfice en PFS dans tous les sous-groupes quel que soit l'âge

MONARCH2 et 3

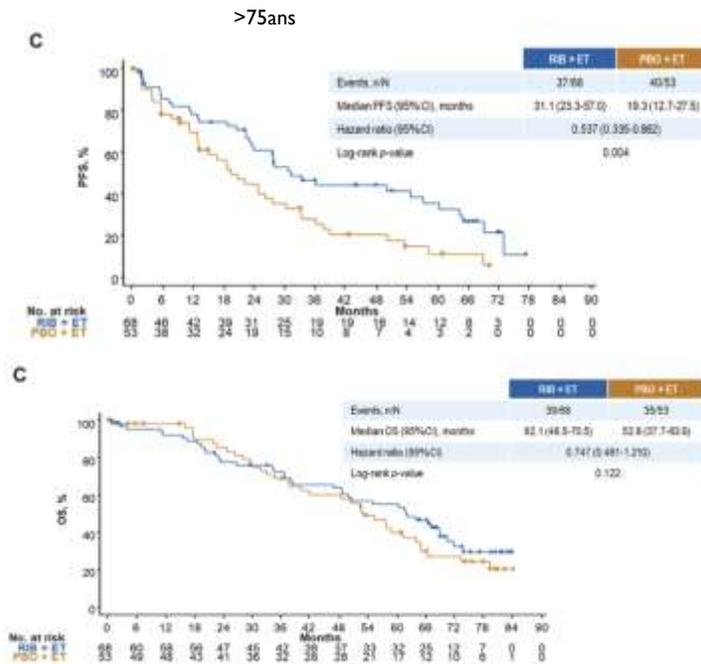


Bénéfice en PFS dans tous les sous-groupes quel que soit l'âge

CAS CLINIQUE #1

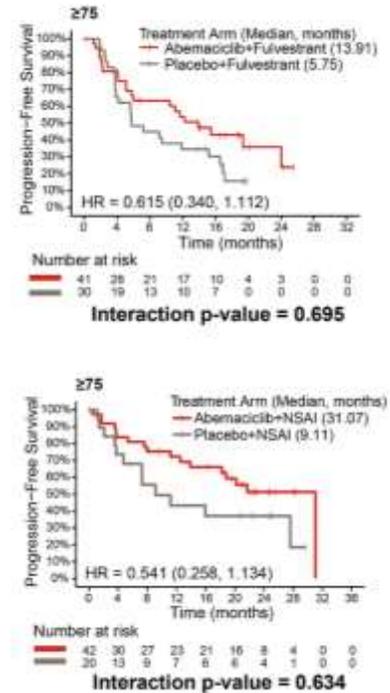
Quid de la population âgée ?

MONALEESA 2,3 et 7



Bénéfice en PFS dans tous les sous-groupes quel que soit l'âge

MONARCH2 et 3



Bénéfice en PFS dans tous les sous-groupes quel que soit l'âge

PalomAGE

- Etude de cohorte prospective de patientes > 70 ans traitées par PALBOCICLIB+HT

CAS CLINIQUE #1

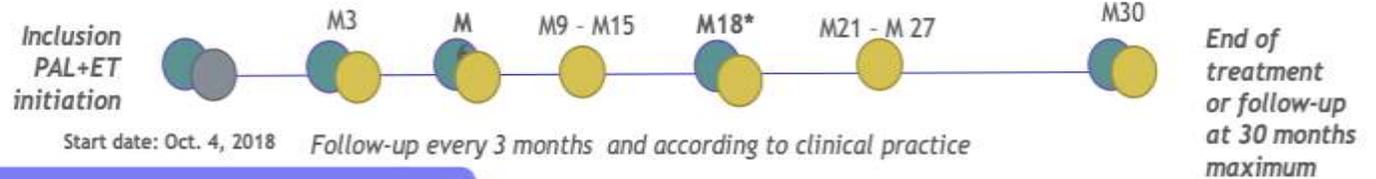
Quid de la population âgée ?

PALOMAGE study design

- Patients with HR+ HER2- aBC; age ≥ 70 yrs (N=807)

COHORT A (N=400)

- ET sensitive and first line treatment for aBC



COHORT B (N=407)

- ET resistant and/or with prior aBC treatment

Primary endpoint

- Proportion of patients who permanently stopped treatment at 6 months (cohort B) and at 18 months (cohort A) for any reason (toxicity, patient's choice, progression or death)

Analysis

- Baseline characteristics (total population)
- Safety evaluation (population with PAL initiation)
 - All AEs/SAEs related or not to the treatment were assessed according to NCI-CTCAE V5.0 criteria at each visit and were described by severity grade

PalomAGE

- Etude de cohorte prospective de patientes > 70 ans traitées par PALBOCICLIB+HT
- Cohorte de 1ère ligne (362 patientes)
 - >50% à >80ans
 - G8 altéré dans 68% des cas
 - 40% de métastases viscérales
- 18-month discontinuation rate for PAL was 41.9%** due to disease progression (20.8%), toxicity (7.7%), patient's choice (6.7%), death (4.6%), or other reason (2.1%).
- Median PFS 28.1 months (95% CI: 25.6-not reached)

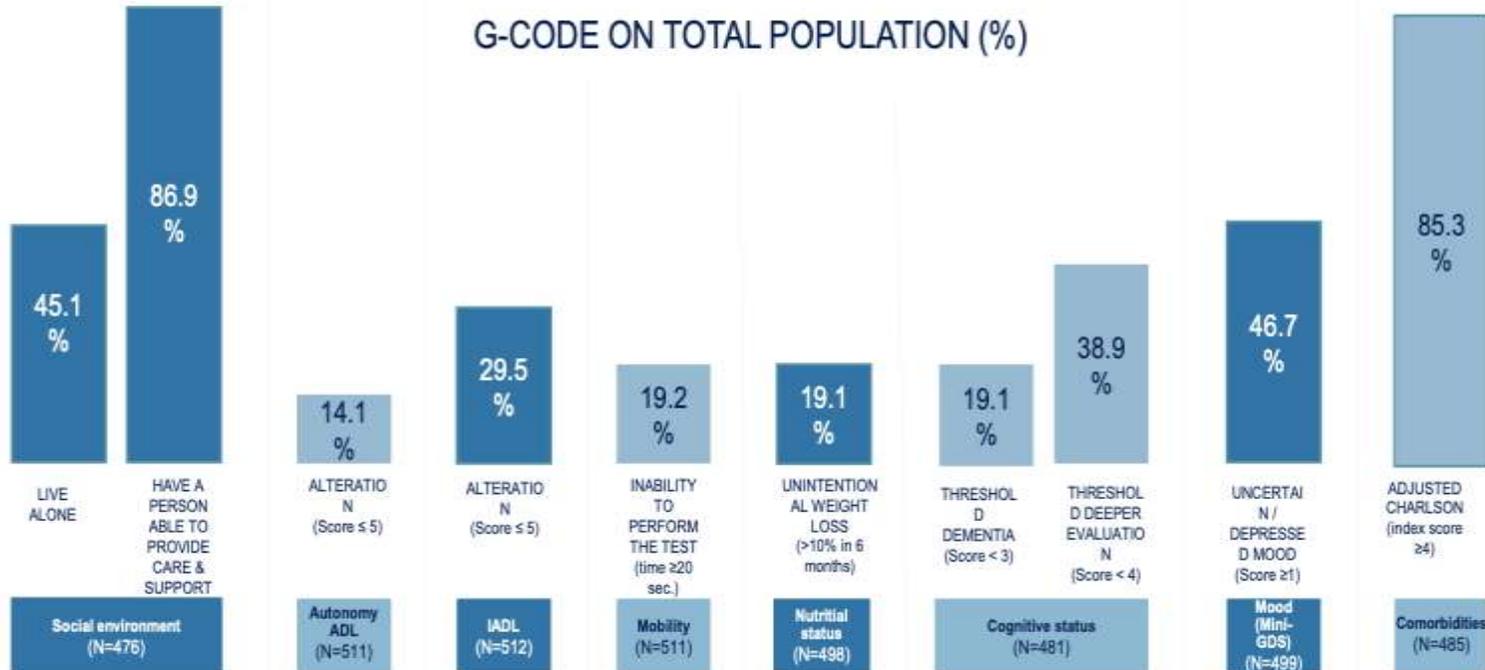
aBC=advanced breast cancer; CTCAE=The Common Terminology Criteria for Adverse Events; EORTC QLQ-30=European Organisation for Treatment of Cancer Quality of Life Questionnaire Core 30; ET=endocrine therapy; HER2-,human epidermal growth factor receptor 2 negative; HR+, hormone receptor positive; M=months; PAL=palbociclib.

CAS CLINIQUE #1

Quid de la population âgée ?

Baseline characteristics: Geriatric Assessment (GA)

- 68,3% G8 ≤ 14
- No difference in GA between both cohorts



PalomAGE

- Etude de cohorte prospective de patientes > 70 ans traitées par PALBOCICLIB+HT
- Cohorte de 1ère ligne (362 patientes)
 - >50% à >80ans
 - G8 altéré dans 68% des cas
 - 40% de métastases viscérales
- Median PFS 28.1 months (95% CI: 25.6-not reached)

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Quels traitements de LI envisager chez cette patiente ?

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HT (Anti-aromatase  Fulvestrant) – CDK4/6i

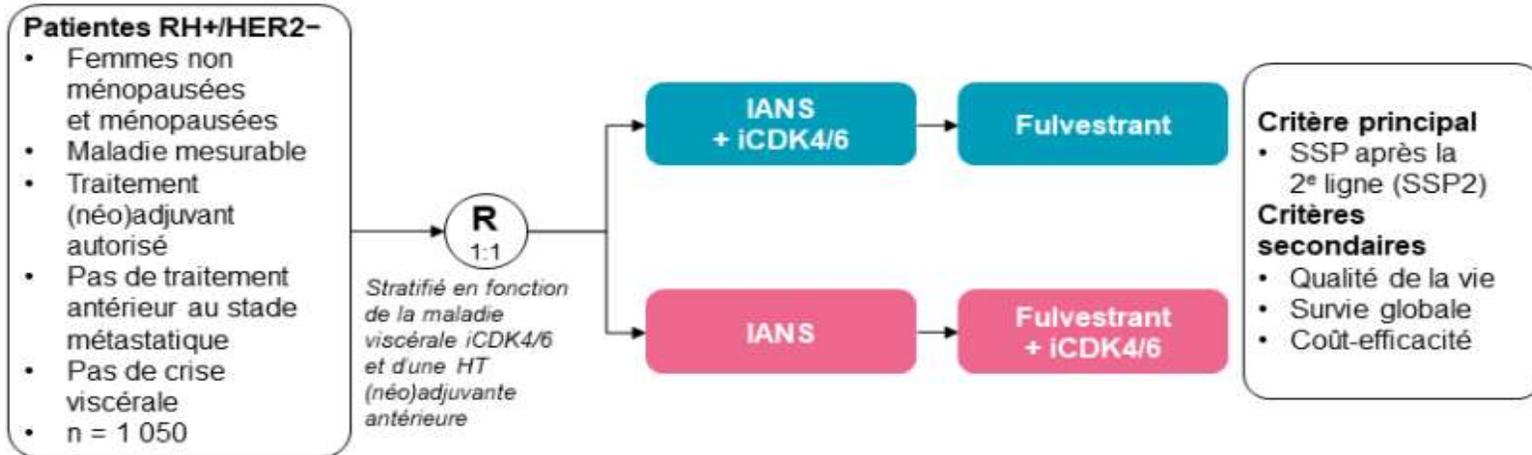
Chimiothérapie  CAPECITABINE

Chimiothérapie  PACLITAXEL

CAS CLINIQUE #1

Peut-on encore faire de l'HT en monothérapie en LI ?

SONIA



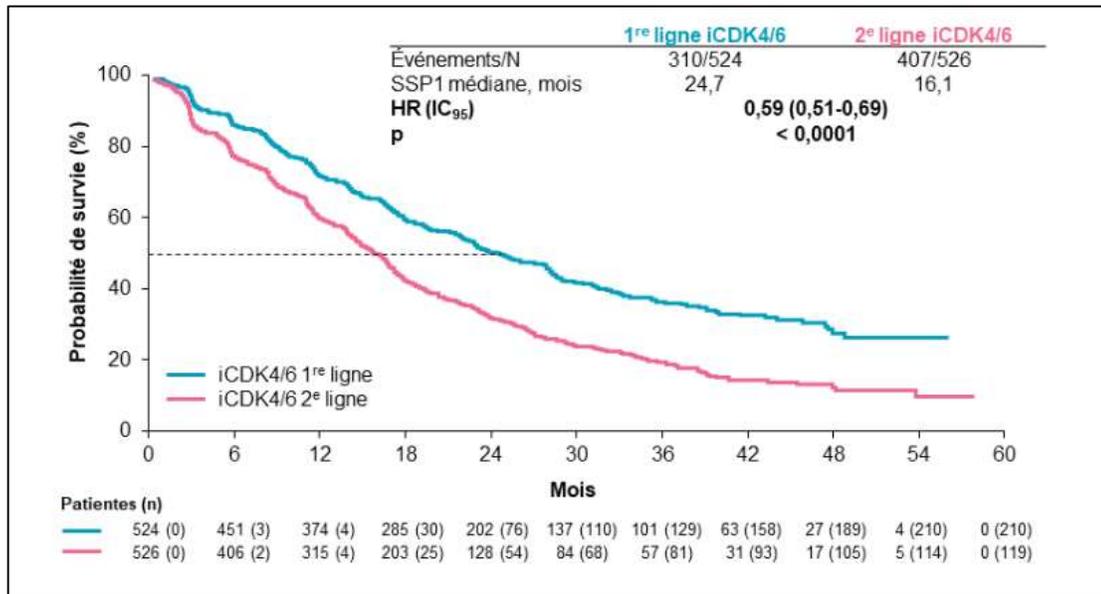
- Évaluation toutes les 12 semaines
- SSP évaluée localement selon RECIST v1.1
- Analyse primaire prévue après 574 événements de SSP2
 - 89 % de puissance pour détecter une supériorité selon l'ESMO MCBS (limite inférieure HR IC ≤ 0,65 et Δ ≥ 3 mois) avec α bilatéral = 5 %

CAS CLINIQUE #1

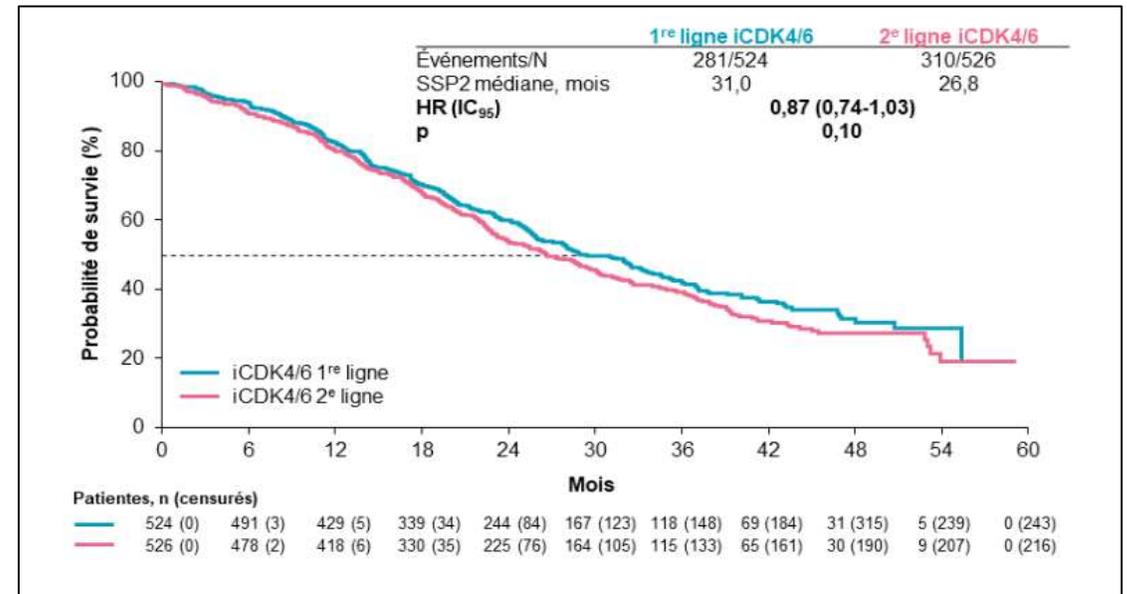
Peut-on encore faire de l'HT en monothérapie en LI ?

SONIA

Median age 64 (24-88)
88% postménopausal



SSP1



SSP2

CAS CLINIQUE #1

Quels traitements de LI envisager chez cette patiente ?

HT (Anti-aromatase –  rant) en monothérapie

HT (Anti-aromatase  restrand) – CDK4/6i

Chimiothérapie  CAPECITABINE

Chimiothérapie  PACLITAXEL

CAS CLINIQUE #1

Si vous avez envisager les CDK4/6I, lequel privilégiez-vous (quelque soit votre partenaire d'HT) ?

ABEMACICLIB (*150mg*2/jour en continu*)

ABEMACICLIB (*100mg*2/jour en continu*)

RIBOCICLIB (*600mg/jour 3W/4*)

RIBOCICLIB (*400mg/jour 3W/4*)

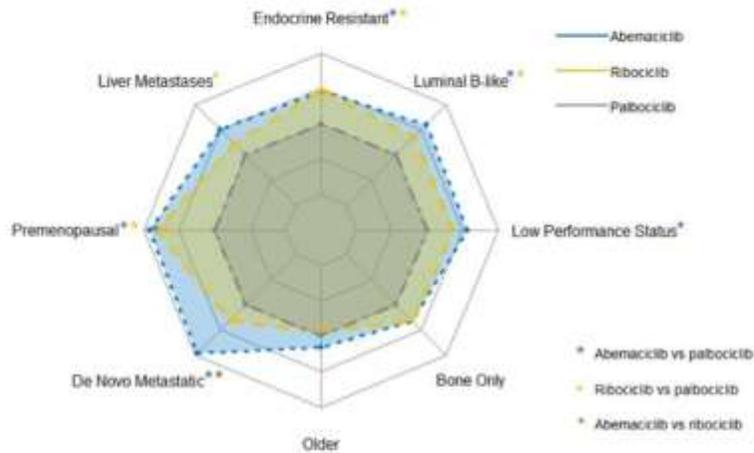
PALBOCICLIB (*125mg/jour 3W/4*)

PALBOCICLIB (*100mg/jour 3W/4*)

CAS CLINIQUE #1

Quel CDK4/6i choisir ?

PALMARES

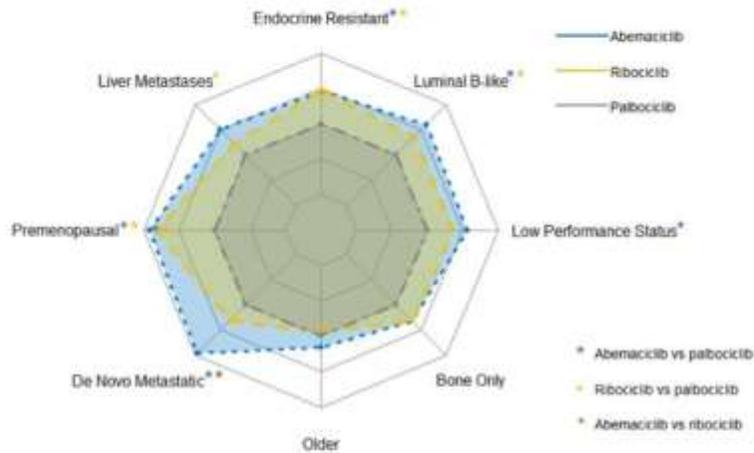


- Abemaciclib and ribociclib were more effective than palbociclib in patients with endocrine-resistant or luminal B-like disease, as well as in premenopausal patients
- Abemaciclib was superior to palbociclib in patients with poorer ECOG PS, and to both palbociclib and ribociclib in patients with de novo metastatic disease
- Both ribociclib and abemaciclib showed a trend towards higher efficacy in patients with liver metastases; however, this difference reached statistical significance only in patients treated with ribociclib
- The three CDK4/6i were similarly effective in patients who were older or had bone-only disease

CAS CLINIQUE #1

Quel CDK4/6i choisir ?

PALMARES



- Abemaciclib and ribociclib were more effective than palbociclib in patients with endocrine-resistant or luminal B-like disease, as well as in premenopausal patients
- Abemaciclib was superior to palbociclib in patients with poorer ECOG PS, and to both palbociclib and ribociclib in patients with de novo metastatic disease
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Profils de tolérance

Données population AGÉE

CAS CLINIQUE #1

Quel CDK4/6i choisir ?

TOXICITE

Diarrhoea¹

Monitor for signs of loose stools¹

Hepatobiliary toxicity^{1,2}

Monitor ALT and AST¹

Monitor LFTs²

Neutropenia^{1,3}

Monitor CBC³

Monitor CBC¹

Monitor CBC²

QT prolongation²

Monitor ECG and electrolytes²

VTE^{1,3}

Monitor for signs and symptoms of DVT and PE³

Monitor for signs and symptoms of DVT and PE¹

ILD/pneumonitis¹⁻³

Monitor for pulmonary symptoms indicative of ILD/pneumonitis³

Monitor for pulmonary symptoms indicative of ILD/pneumonitis¹

Monitor for pulmonary symptoms indicative of ILD/pneumonitis²

PAL

ABE

RIBO

CAS CLINIQUE #1

Quel CDK4/6i choisir ?

TOXICITE

Diarrhoea¹

Hepatobiliary toxicity^{1,2}

Neutropenia^{1,3}

QT prolongation²

VTE^{1,3}

ILD/
pneumonitis¹⁻³

Monitor for signs of loose stools¹

Monitor ALT and AST¹

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Monitor for signs and symptoms of DVT and PE¹

Monitor for pulmonary symptoms indicative of ILD/pneumonitis¹

Monitor LFTs²

Monitor CBC²

Monitor ECG and electrolytes²

Monitor for pulmonary symptoms indicative of ILD/pneumonitis²

PAL

ABE

RIBO

Monitor CBC³

Monitor for signs and symptoms of DVT and PE³

Monitor for pulmonary symptoms indicative of ILD/pneumonitis³

CAS CLINIQUE #1

Quel CDK4/6i choisir ?

TOXICITE

Diarrhoea¹

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PAL

ABE

RIBO

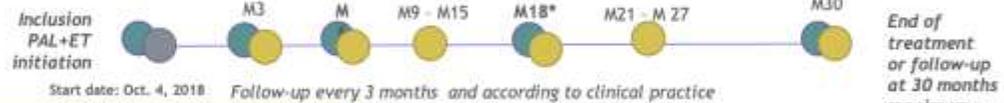
CAS CLINIQUE #1

A quel dosage débuté ?

PALOMAGE

- Patients with HR+ HER2- aBC; age ≥ 70 yrs (N=807)

COHORT A (N=400)
• ET sensitive and first line treatment for aBC



COHORT B (N=407)
• ET resistant and/or with prior aBC treatment

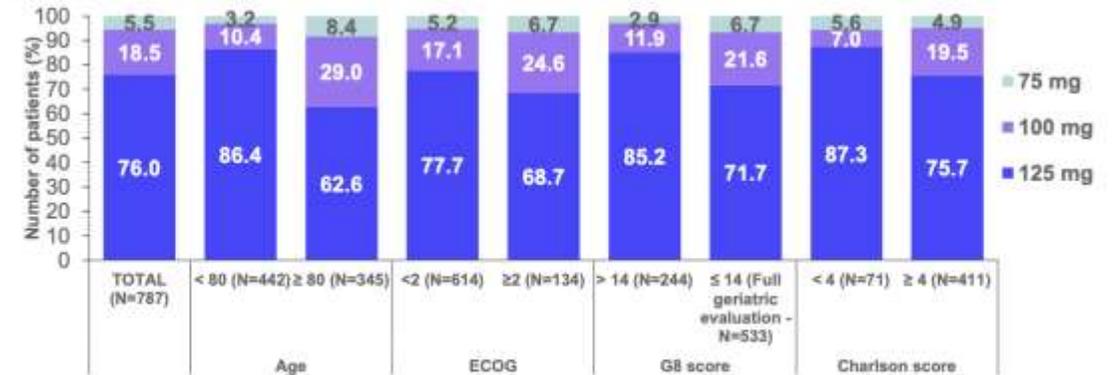
Primary endpoint

- Proportion of patients who permanently stopped treatment at 6 months (cohort B) and at 18 months (cohort A) for any reason (toxicity, patient's choice, progression or death)

Analysis

- Baseline characteristics (total population)
- Safety evaluation (population with PAL initiation)
 - All AEs/SAEs related or not to the treatment were assessed according to NCI-CTCAE V5.0 criteria at each visit and were described by severity grade

Palbociclib initial dose based on frailty factors



Older and frailer (according to ECOG PS, G8 or Charlson scores) patients were more often initiated at a lower dose of palbociclib than younger, less frail patients

CAS CLINIQUE #1

A quel dosage débuté ?

ABEMACICLIB

RIBOCICLIB

AE, n (%)	Abemaciclib+ET ^a			Placebo+ET ^a		
	<65 (n=496)	65-74 (n=219)	≥75 (n=93)	<65 (n=222)	65-74 (n=112)	≥75 (n=50)
Diarrhea						
Any grade	196 (39.0)	187 (85.6)	71 (75.3)	17 (25.7)	33 (29.3)	17 (34.0)
Grade ≥3	164 (33.0)	99 (45.2)	46 (49.4)	15 (6.8)	5 (4.5)	8 (16.0)
Grade 3 ^b	46 (9.0)	28 (12.8)	16 (19.3)	1 (0.5)	0 (0.0)	2 (4.0)
Neutropenia						
Any grade	113 (22.6)	106 (48.4)	25 (26.1)	8 (3.6)	4 (3.6)	0 (0.0)
Grade ≥3	130 (25.8)	60 (27.4)	15 (16.1)	4 (1.8)	2 (1.8)	0 (0.0)
ALT increase						
Any grade	56 (11.3)	33 (15.1)	7 (8.4)	15 (6.8)	6 (5.4)	3 (6.0)
Grade ≥3	21 (4.0)	12 (5.5)	4 (4.0)	5 (2.3)	1 (0.9)	1 (2.0)
AST increase						
Any grade	69 (14.0)	34 (15.5)	7 (8.4)	17 (7.7)	7 (6.3)	3 (6.0)
Grade ≥3	11 (2.0)	7 (3.2)	2 (2.4)	4 (1.8)	3 (2.7)	1 (2.0)
Blood ALP increase						
Any grade	20 (4.0)	15 (6.8)	4 (4.0)	8 (3.6)	3 (2.7)	2 (4.0)
Grade ≥3	1 (0.2)	1 (0.4)	1 (1.1)	0 (0.0)	0 (0.0)	1 (2.0)
Blood bilirubin increase						
Any grade	7 (1.3)	5 (2.3)	1 (1.1)	2 (0.9)	1 (0.9)	0 (0.0)
Grade ≥3	1 (0.2)	2 (0.9)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)
VTE events ^c						
Any grade	19 (4.1)	11 (5.0)	3 (3.3)	1 (0.5)	1 (0.9)	1 (2.0)
Grade ≥3	8 (1.6)	6 (2.7)	4 (4.0)	1 (0.5)	1 (0.9)	0 (0.0)
Electrolyte events ^d						
Any grade	16 (3.4)	7 (3.2)	3 (3.0)	2 (0.9)	0 (0.0)	0 (0.0)
Grade ≥3	4 (0.8)	3 (1.4)	0 (0.0)	0 (0.0)	0 (0.0)	0 (0.0)

Dose adjustments, n (%)	Abemaciclib+ET		
	<65 (n=496)	65-74 (n=219)	≥75 (n=93)
Pts with ≥1 dose adjustment	294 (59.3)	163 (74.4)	63 (75.9)
Pts with ≥1 dose reduction	259 (52.0)	151 (69.0)	60 (72.3)
Dose reduction due to AEs	223 (45.0)	143 (65.3)	58 (69.8)
Diarrhea	39 (12.7)	49 (22.4)	25 (30.1)
Neutropenia	75 (16.1)	46 (21.0)	8 (9.6)
Pts with ≥1 dose escalation	199 (42.7)	125 (57.1)	46 (55.4)
Dose escalation due to AEs	175 (37.6)	120 (54.8)	46 (55.4)
Diarrhea	68 (14.6)	41 (18.7)	18 (22.9)
Neutropenia	32 (11.2)	29 (13.2)	5 (6.0)

Study treatment discontinuations, n (%)	Abemaciclib+ET		
	<65 (n=496)	65-74 (n=219)	≥75 (n=93)
Pts discontinued at each treatment due to AE	41 (8.4)	31 (14.2)	20 (24.1)
Diarrhea	2 (0.4)	4 (1.8)	4 (4.8)
Long infection	1 (0.2)	1 (0.4)	0 (0.0)
ALT increase	4 (0.8)	3 (1.4)	0 (0.0)

Concomitant medication pts with ≥1, n (%)	Abemaciclib+ET		
	<65 (n=496)	65-74 (n=219)	≥75 (n=93)
Anticancer drugs	342 (75.4)	137 (61.7)	60 (72.3)
Antibiotics	54 (11.6)	45 (20.5)	17 (20.3)
G-CSF/CM-CSF	30 (6.4)	14 (6.4)	2 (2.4)

Adverse events by age groups.

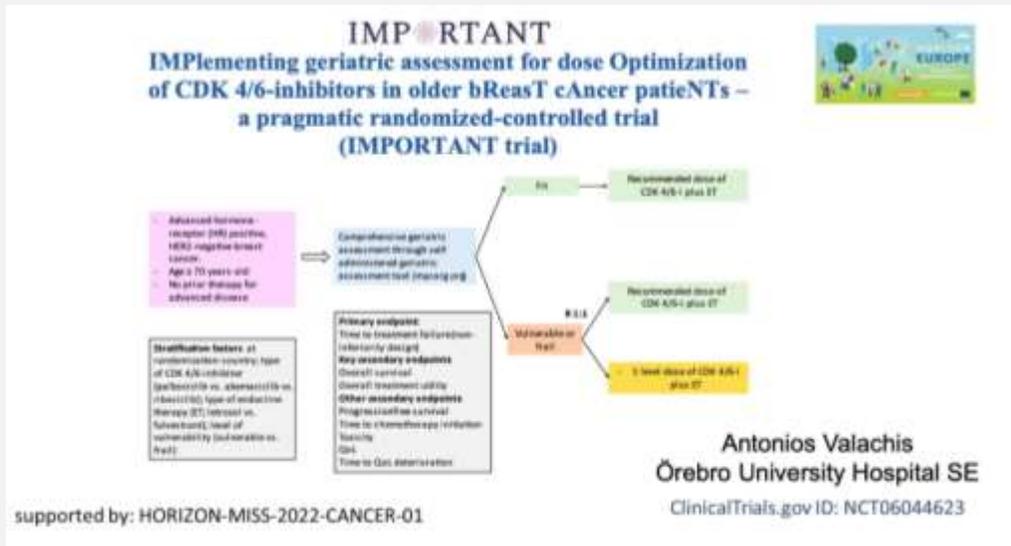
≥ 15 % in either arm, n (%) ^b	< 65y		65-74y				≥ 75y					
	All-grade		Grade 3/4		All-grade		Grade 3/4		All-grade		Grade 3/4	
	RIB + ET	PBO + ET										
Any AE ^c	412 (98)	342 (98)	353 (84)	132 (38)	186 (99)	142 (97)	168 (89)	62 (42)	68 (100)	50 (96)	60 (88)	31 (60)

Dose modifications by age groups.

Modification	< 65y		65-74y		≥ 75y	
	RIB + ET	PBO + ET	RIB + ET	PBO + ET	RIB + ET	PBO + ET
Patients with permanent discontinuations, n (%)	347 (83)	327 (93)	164 (87)	142 (97)	64 (94)	52 (100)
Patients with discontinuation due to AE, n (%)	61 (15)	11 (3)	37 (20)	10 (7)	28 (41)	4 (8)

CAS CLINIQUE #1

A quel dosage débuté ?



Research In progress: Not yet recruiting

Comparing Oral Drug Dosing Strategies in Older Patients with Metastatic Breast Cancer to Maximize Tolerance and Reduce Discontinuation: The CDK4/6 Inhibitor Dosing Knowledge (CDK) Study

500 patients ≥ 65 yo
HR+/HER2- MBC
planned use of CDK4/6i
(PAL or RIB) + ET
1st time in metastatic setting

Indicated dose (start high, deescalate if needed)
versus (1:1)
titrated dose (start low, escalate if tolerated)

Primary objective = time to discontinuation of CDK4/6i

<https://www.pcori.org/>, <https://clinicaltrials.gov/study/NCT06377852>

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QUESTION BONUS

A 80 ans soit après 24 mois de traitement par LETROZOLE-PALBOCICLIB, la patiente progresse au niveau hépatique avec cytolyse à 3N, PSI ?

FULVESTRANT

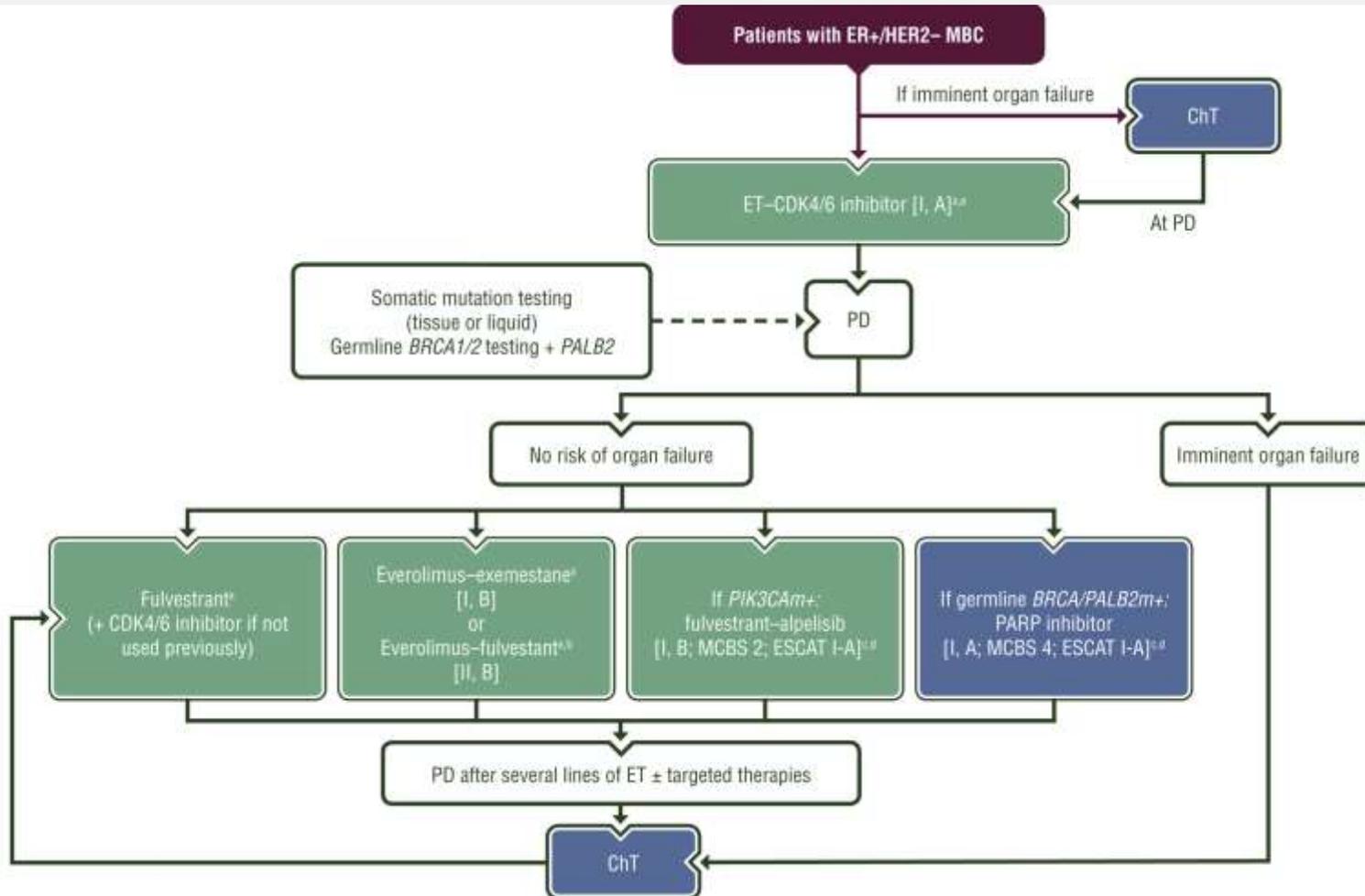
FULVESTRANT-EVEROLIMUS

TDXD

TAXOL

CAPECITABINE

CONCLUSION



ET alone in the first-line setting should be reserved for the small group of patients with comorbidities or a performance status (PS) that prevents the use of CDK4/6 inhibitor combinations; there are no clinical or biomarker data that can help to identify patients suitable for ET alone. Older age alone should not be used to select for endocrine monotherapy, although there may be a higher incidence of haematological adverse events (AEs) from CDK4/6 inhibitor therapy in older patients.¹

Targeted therapies in luminal tumours

Efficacy of cyclin-dependent kinase 4/6 (CDK4/6) inhibition is age independent in the subgroup and pooled analyses of landmark studies of palbociclib, ribociclib, and abemaciclib,⁹⁵⁻⁹⁸ with no age-related changes in pharmacokinetics. Nevertheless, patients age 75 years or older experience higher rates of toxicity and dose modifications.⁹⁹ Although endocrine therapy alone is still reasonable in particular patients, CDK4/6 inhibitors are a suitable treatment in older patients.⁹⁹

Everolimus should be used with caution in older patients in view of its safety profile. A subgroup analysis of the BOLERO-2 study¹⁰⁰ revealed a higher rate of discontinuations in patients age 70 years or older and more on-treatment deaths. 26% of patients enrolled in the expanded access BALLET trial¹⁰¹ were aged older than 70 years, which similarly reported more frequent adverse event-related dose discontinuations, reductions, and interruptions.

MERCI DE VOTRE ATTENTION