



1. SYNOPSIS

Name of Sponsor: GBG Forschungs GmbH	Individual Study Table Referring to Part of the Dossier	<i>(For National Authority Use only)</i>
Name of finished product: Abraxane Various products of <i>sb</i> -paclitaxel Perjeta	Volume:	
Name of active ingredient: <i>nab</i> -paclitaxel <i>sb</i> -paclitaxel Pertuzumab	Page:	
Title of Study: A randomized phase III trial comparing nanoparticle-based paclitaxel with solvent-based paclitaxel as part of neoadjuvant chemotherapy for patients with early breast cancer (GeparSepto) – GBG 69		
Investigators: Prof. Dr. Michael Untch Helios-Clinic Berlin-Buch D-13125 Berlin, Schwanebecker Chaussee 50 Germany.		
Study Center(s): The study was conducted at 69 centers in Germany. See Annex 1.		
Publication (reference): A randomized phase III trial comparing nab-paclitaxel with solvent-based paclitaxel as part of neoadjuvant chemotherapy in early breast cancer. GBG 69 – GeparSepto. Submitted for publication		
Studied Period (years): Date first patient enrolled: 30-Jul-2012 Data base lock date for reporting: 03-Jul-2015		
Phase of Development: Phase 3		
Objectives: Primary Objectives: The primary objective of this study was to compare the pathological complete response (pCR= <i>ypT0 ypN0</i>) rates of neoadjuvant treatment of <i>nab</i> -paclitaxel with solvent-based paclitaxel as part of neoadjuvant treatment of operable or locally advanced primary breast cancer. Secondary Objectives: <ul style="list-style-type: none"> • Assess the pCR rates per arm separately for the stratified subpopulations. • Determine the rates of <i>ypT0/is ypN0</i>; <i>ypT0 ypN0/+</i>; <i>ypT0/is ypN0/+</i>; <i>ypT(any) ypN0</i>; and regression grades. • Determine the response rates of the breast tumor and axillary nodes based on physical examination and imaging tests (sonography, mammography, or MRI) after treatment in both arms. • Assess clinical response rate after taxane in both groups. 		



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<ul style="list-style-type: none"> • Determine the breast conservation rate after each treatment. • Assess the toxicity and compliance. • Assess the time of onset of grade 3 neuropathy. • Assess the time of resolution of grade 3/4 neuropathy to at least grade 1. • Determine loco-regional invasive recurrence free survival (LRRFS), distant-disease-free survival (DDFS), invasive disease-free survival (IDFS), and overall survival (OS) in both arms and according to stratified subpopulations. • Assess regional recurrence free survival (RRFS) in patients with initial node-positive axilla converted to negative at surgery and treated with sentinel node biopsy alone. • Determine the pCR rate and local recurrence free survival (LRFS) in patients with a clinical complete response (cCR) and a negative core biopsy before surgery. • Examine and compare pre-specified molecular markers such as SPARC, gp60, calveoline 1 and other markers potentially differentially predicting efficacy of nab-paclitaxel and solvent-based paclitaxel on core biopsies before, during and after chemotherapy. <p>Additional secondary objectives (introduced by Amendment 3 and to be ascertained during the ongoing follow-up period with results expected in 2018):</p> <ul style="list-style-type: none"> • Assess quality of life with a focus on persisting peripheral neuropathy using the FACT Taxane (Version 4) questionnaire, treatment of PNP, and cardiac toxicity. • Identify circulating tumor (ct)DNA at the time of surgery and correlate with pCR. • Identify early relapses based on ctDNA during follow-up. • Collect information about BRCA status – if known – and other mutations. • Assess smoking habits and alcohol consumption before and after treatment and to compare it with the efficacy and safety of study treatment as well as with genetic changes in the tumor. <p>Objectives of sub-studies were to:</p> <ul style="list-style-type: none"> • Investigate biomarkers in HER2+ breast cancer patients treated with trastuzumab, pertuzumab or the combination of both prior to the start of the main treatment in GeparSepto (HER2 resistance window-substudy). • Correlate Single Nucleotide Polymorphisms (SNPs) of genes with the associated toxicity and histologically assessed treatment effect (Pharmacogenetic substudy). • Assess the positive predictive value for a pCR of a negative (≥ 3) core biopsies before surgery in 		



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<p>patients with complete clinical response (surgical substudy in patients with high probability for pCR).</p> <ul style="list-style-type: none"> Assess ovarian function measured by amenorrhea rate in correlation with changes in E2, FSH, LH, Anti-Müller Hormone, ultrasound-follicle count in patients aged <45 years. Demonstrate that PET-CT before surgery in addition to conventional presurgical staging methods can decrease the mastectomy rate in patients receiving neoadjuvant chemotherapy for breast cancer. 		
<p>Methodology:</p> <p>This was a multicenter, prospective, randomized, open-label, phase 3 study evaluating the efficacy and safety of <i>nab</i>-paclitaxel versus <i>sb</i>-paclitaxel as part of neoadjuvant treatment for operable and locally advanced breast cancer. Randomization to <i>sb</i>-paclitaxel (Arm A) or <i>nab</i>-paclitaxel (Arm B) was conducted in a 1:1 ratio with stratification factors as follows:</p> <ul style="list-style-type: none"> Breast cancer subtype (HER2+/HR- vs HER2+/HR+ vs HER2-/HR- vs HER2-/HR+). Ki67 at baseline ($\leq 20\%$ vs $> 20\%$). Secreted protein acidic and rich in cysteine (SPARC) (positive [immunoreactive score {IRS} 6-12] vs negative [IRS 0-5]). <p>The breast tissue was assessed at each research site by a local pathologist following standardized histological examinations procedures. Histology reports were centrally reviewed in a blinded fashion.</p> <p>A window of opportunity sub-study (n=60) was included by Amendment 1 (20-Aug-2012), to compare the predictive value of several biomarkers for resistance to HER2 targeted therapy, in HER2+ patients treated for 6 weeks with either trastuzumab, pertuzumab, or a combination of both agents.</p> <p>The initial dose of <i>nab</i>-paclitaxel was 150 mg/m² QW. The results of an interim safety analysis including the data of the first 60 patients who completed systemic treatment with paclitaxel revealed that the <i>nab</i>-paclitaxel dose of 150 mg/m² was associated with a significantly higher incidence of non hematological toxicities (especially peripheral sensory neuropathy), treatment discontinuations, and dose reductions. These observations led to a recommendation by the Independent Data Monitoring Committee to amend the study and reduce the <i>nab</i>-paclitaxel dose to 125 mg/m² QW (Amendment 2, 28-Mar-2013).</p> <p>The study was further amended (Amendment 3, 10-Jun-2015) with respect to the collection of structured post-surgery follow-up data, patient reported outcome (PRO) and collection of additional plasma for circulating tumor DNA assessment. Follow-up will continue until the analysis of invasive disease-free survival (IDFS) (and other time-to-event secondary endpoints) after 248 progression events have occurred. This is anticipated to occur at the end of 2017, approximately 5 years after the first patient was enrolled.</p>		
<p>Number of patients (planned and analyzed):</p>		



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<p>The study planned to recruit 1200 patients with approximately 400 patients with HER2+ disease. In total, 1229 patients were randomized, of them 402 patients with HER2+ disease.</p>		
<p>Diagnosis and Main Criteria for Inclusion:</p> <p>The study included patients at least 18 years of age with unilateral or bilateral primary carcinoma of the breast histologically confirmed by core biopsy and measurable disease (ie, tumor lesion in the breast with maximum diameter of ≥ 2 cm by palpation or ≥ 1 cm by sonography; tumor measurable in 2 dimensions). The eligible patient also had to be classified in one of the following stages of disease:</p> <ul style="list-style-type: none"> • cT2 - cT4a-d or • cT1c and cN+ or • cT1c and pNSLN+ or • cT1c and ER- and PR- or • cT1c and Ki67>20% • cT1c and HER2+ <p>Additionally, the patient's ER/PR/HER2, Ki-67 and SPARC status had to be centrally confirmed from the core biopsy prior to randomization.</p>		
<p>Test Products, Dose and Mode of Administration, Batch Number:</p> <p>Patients were treated with either</p> <ul style="list-style-type: none"> • <i>nab</i>-Paclitaxel 150 mg/m² (Abraxane[®]) (changed to 125 mg/m² after 28-Mar-2013 by Amendment 2), i.v., or • <i>sb</i>-Paclitaxel 80 mg/m², i.v., <p>in a dose-dense regimen of once weekly (QW) doses for 12 weeks.</p> <p>Taxane treatment was followed by epirubicin 90 mg/m² plus cyclophosphamide 600 mg/m², i.v., Q3W for 4 cycles prior to surgery. Patients with HER2+ disease based on central confirmation of HER2+ status also received trastuzumab and pertuzumab (Perjeta[®]) Q3W for eight cycles concurrently with chemotherapy prior to surgery.</p> <p>Pertuzumab (in HER2+ patients) was dosed at 840 mg, i.v., on Day 1 of the first cycle, followed by 420 mg, i.v., on Day 1 of each following cycle. Trastuzumab (in HER2+ patients) was dosed at 8 mg/kg body weight, i.v., at the first infusion over 90 min, followed by 6 mg/kg body weight, i.v., over 30-90 min (maintenance dose) on Day 1 of each following cycle.</p>		



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<p>Duration of Treatment:</p> <p>Taxane treatment (<i>sb</i>-paclitaxel or <i>nab</i>-paclitaxel) was given QW for 12 weeks, followed sequentially by epirubicin/cyclophosphamide treatment given Q3W for 4 cycles (Day 1 of a 21-day cycle). Study treatment was given in both arms until surgery, disease progression, unacceptable toxicity, or withdrawal of consent of the patient.</p> <p>Patients who participated in the HER2 window substudy received either trastuzumab, pertuzumab or the combination Q3W for 6 weeks without chemotherapy prior to the start of chemotherapy and then continued with the combination of trastuzumab and pertuzumab on Day 1 of all cycles until surgery. An additional core biopsy was taken after the window of opportunity phase prior to the start of chemotherapy.</p>		
<p>Reference Therapy, Dose and Mode of Administration:</p> <p><i>sb</i>-Paclitaxel. See above for details on therapy and dose.</p>		
<p>Criteria for Evaluation:</p> <p>Efficacy:</p> <p>Primary endpoint</p> <p>The primary efficacy endpoint of this study was pathological complete response (pCR=ypT0 ypN0) defined as no microscopic evidence of residual viable tumor cells (invasive or noninvasive) in any resected specimens of the breast and axillary nodes.</p> <p>Secondary endpoints:</p> <ul style="list-style-type: none"> ypT0/is ypN0; ypT0 ypN0/+; ypT0/is ypN0/+, ypT(any) ypN0 were defined according to the TNM classification (Edition 7). Clinical and imaging response was assessed every 2nd cycle and before surgery by physical examination and imaging tests. Clinical (imaging) response of the breast was specified as complete response (CR), partial response (PR), stable disease (NC), and progressive disease (PD). Clinical response was reported for the end of taxane treatment and before surgery (end of EC treatment). Response of the axillary nodes was defined as conversion from cN+ (by palpation) at baseline to cN0 (at the end of taxane treatment and before surgery). Breast conservation was defined as tumor resection, segmental resection or quadrant resection as last surgical procedure. Biomarker analysis: To examine and compare pre-specified molecular markers such as SPARC, gp60, calveoline 1 and other markers potentially differentially predicting efficacy of <i>nab</i>-paclitaxel and <i>sb</i>-paclitaxel on core biopsies before, during and after chemotherapy. <p>Safety:</p> <ul style="list-style-type: none"> Toxicity referred to as any Grade I-IV adverse events (AEs) during study treatment. Time of onset of Grade 3 peripheral neuropathy. 		



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<ul style="list-style-type: none"> • Cycle of onset of Grade 3 peripheral neuropathy. • Time of resolution of Grade 2-4 or Grade 3-4 peripheral neuropathy to Grade ≤ 1. • AEs of Special Interest. • Treatment compliance (dose reductions, treatment delays, treatment interruptions and premature treatment discontinuations). Relative total dose (RTD) and relative total dose intensity (RTDI) were reported for taxane and for EC. <p>Additional secondary endpoints (to be analyzed at a later time point):</p> <ul style="list-style-type: none"> • Loco-regional invasive recurrence free survival (LRRFS), distant disease free survival (DDFS), Invasive disease-free survival (IDFS), overall survival (OS), local recurrence free survival (LRFS), regional recurrence free survival (RRFS), event free survival (EFS). • Quality of life with a focus on persisting peripheral neuropathy will be assessed using the FACT Taxane (Version 4) questionnaire, treatment of PNP, and cardiac toxicity. • ctDNA at the time of surgery and correlation with pCR. • Early relapses based on ctDNA during follow-up. • Collection of information about BRCA status – if known – and other mutations. • Assessment of smoking habits and alcohol consumption before and after treatment and comparison with the efficacy and safety of study treatment as well as with genetic changes in the tumor. 		
<p>Statistical Methods:</p> <p>Analyses were based on the Intent-to-Treat Set (ITT), the Modified Intent-to-Treat Set (mITT), the Evaluable Subset for Safety (safety population), Evaluable Subsets for Efficacy, the Per-Protocol Analysis Set, and Sensitivity Analysis Set.</p> <p>Primary efficacy endpoint analysis:</p> <p>The primary endpoint was summarized as pCR rate for each treatment group. Two-sided 95% confidence intervals were calculated according to Pearson and Clopper (1934). The difference in the rates of pCR between groups was evaluated as an odds ratio and its 95% confidence interval. Closed test procedure was used to test for non-inferiority first, the <i>nab</i>-paclitaxel-EC arm was considered as non-inferior to the <i>sb</i>-paclitaxel-EC arm, if the 2-sided 95% CI for the odds ratio did not include 0.858 (OR from 33% pCR rate in control arm to 33% -3.3%=29.7%, corresponded to the 10% non-inferiority margin), and only if the non-inferiority test was positive, the 2-sided continuity corrected χ^2-test for superiority was performed. In case of non-superiority, the non-inferiority of <i>nab</i>-paclitaxel was only to be considered confirmed, if it was also supported by the per-protocol analysis. A secondary logistic regression analysis adjusting for the stratification factors was conducted. Uni- and multivariate logistic regression was performed for pCR to report odds ratio with 95% CI and adjusted for pre-defined factors. Additionally, for patients treated with <i>nab</i>-paclitaxel, a logistic regression analysis was performed for pCR with randomization period (before vs on or after 28 March 2013) and cumulative dose of <i>nab</i>-paclitaxel; overall and for HER2-positive and TNBC subgroups, the</p>		



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<p>same was done with dose intensity instead of cumulative dose.</p> <p>Secondary efficacy endpoint analysis:</p> <p>Short-term secondary efficacy endpoints (pCR, clinical and imaging response rates, ypT0/is ypN0, ypT0, ypT0/is, ypN0, breast and axilla conservation) were analyzed together with the primary efficacy. The time-to-event efficacy endpoints (IDFS, DDFS, LRRFS, LRFs, RRFs, OS, EFS) will be analyzed at a later time point. The secondary endpoints clinical and imaging response rates, ypT0/is ypN0, ypT0 ypN0/+, ypT0/is ypN0/+, ypT(any) ypN0, and breast conservation were summarized as number and percent of patients for each treatment group. Two-sided 95% confidence intervals were calculated according to Pearson and Clopper (1934) and odds ratios between treatment groups from univariate logistic regression were reported for all of them. Clinical/imaging response at the end of taxane treatment was cross-tabulated against the clinical/imaging response before surgery in each arm. Time-to-event efficacy outcomes will be analyzed after the end of the study by referring to data from the GBG's patients registry. Curves will be estimated using the Kaplan-Meier method, based on the mITT population. The median survival times (and 95% CIs) will be estimated using the Kaplan Meier curves (if median is reached). Kaplan-Meier estimates of 3-, and 5-year probability of survival will be provided together with the 95% CI.</p> <p>A 2-sided continuity corrected χ^2-test was used to compare clinical and imaging response rates, ypT0/is ypN0, ypT0 ypN0/+, ypT0/is ypN0/+, ypT(any), ypN0, and breast conservation between arms. A 2-sided log-rank test will be used to compare time-to-event efficacy outcomes between treatment arms.</p> <p>Univariate and multivariate Cox proportional hazards model will be used for IDFS, DDFS, OS, EFS to report hazard ratios with 95% CI and to adjust for pre-defined factors.</p>																															
SUMMARY																															
<p>Between June 2012 and January 2014, a total of 1373 patients were screened at 69 sites for eligibility of whom 1229 were randomized and 1206 started treatment (606 with <i>nab</i>-paclitaxel and 600 with <i>sb</i>-paclitaxel, representing the mITT set).</p> <p>Efficacy Results (mITT set):</p> <p>Table: Primary Efficacy Endpoint: pCR (ypT0 ypN0) (mITT Population)</p> <table border="1"> <thead> <tr> <th>Parameter</th> <th><i>sb</i>-Paclitaxel (N = 600) n (%)</th> <th><i>nab</i>-Paclitaxel (N = 606) n (%)</th> <th>Overall (N = 1206) n (%)</th> </tr> </thead> <tbody> <tr> <td>pCR (ypT0 ypN0)</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Yes</td> <td>174 (29.0)</td> <td>233 (38.4)</td> <td>407 (33.7)</td> </tr> <tr> <td>No</td> <td>426 (71.0)</td> <td>373 (61.6)</td> <td>799 (66.3)</td> </tr> <tr> <td>95% CI</td> <td>(25.4%, 32.6%)</td> <td>(34.6%, 42.3%)</td> <td>(31.1%, 36.4%)</td> </tr> <tr> <td>OR (95% CI)</td> <td></td> <td>1.53 (1.20, 1.95)</td> <td></td> </tr> <tr> <td>p-value</td> <td></td> <td>p = 0.001</td> <td></td> </tr> </tbody> </table> <p>CI = confidence interval; mITT = modified intent-to-treat set; OR = odds ratio; pCR = pathological complete</p>				Parameter	<i>sb</i> -Paclitaxel (N = 600) n (%)	<i>nab</i> -Paclitaxel (N = 606) n (%)	Overall (N = 1206) n (%)	pCR (ypT0 ypN0)				Yes	174 (29.0)	233 (38.4)	407 (33.7)	No	426 (71.0)	373 (61.6)	799 (66.3)	95% CI	(25.4%, 32.6%)	(34.6%, 42.3%)	(31.1%, 36.4%)	OR (95% CI)		1.53 (1.20, 1.95)		p-value		p = 0.001	
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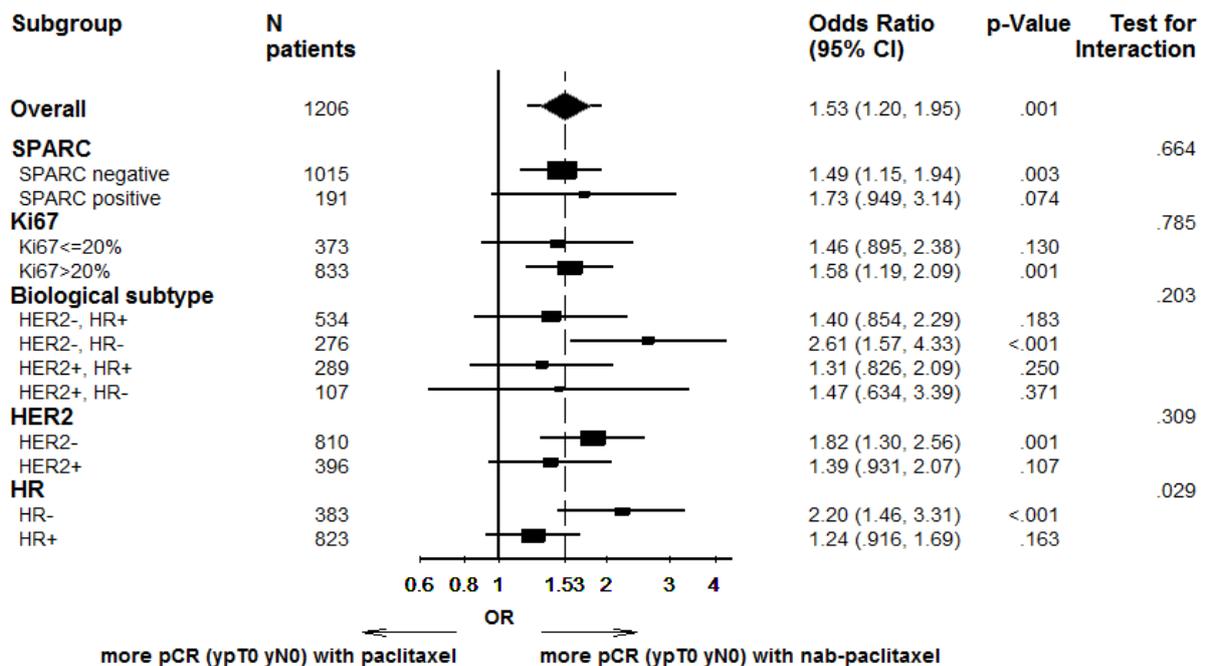
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response.

Overall 233/606 patients who started *nab*-paclitaxel (38.4% [95%CI 34.6%, 42.3%]) achieved a pCR compared to 174/600 who started *sb*-paclitaxel (29.0% [25.4%, 32.6%]; unadjusted χ^2 $p=0.00065$) corresponding to a clinically relevant and statistically significant improvement in pCR of 9.4%, OR of 1.53 (95% CI, 1.20-1.95; unadjusted Wald $p=0.00054$).

In multivariable logistic regression analysis, *nab*-paclitaxel remained an independent predictor for achievement of pCR after adjustment for baseline and minimisation factors (OR 1.66; 95% CI, 1.25-2.19; $p=0.00043$). The results according to other pCR definitions were consistent: 259/606 [42.7% (38.8%, 46.7%)] versus 207/600 [34.5% (30.7%, 38.3%; $p=0.0040$)] for ypT0/is ypN0; and 295/606 [48.7% (44.7%, 52.7%)] versus 238/600 [39.7% (35.8%, 43.6%; $p=0.0020$)] for ypT0/is ypN0/+.

Figure: Primary Efficacy Endpoint: pCR (ypT0 ypN0) in subgroups



In all prospectively defined subgroups based on minimisation factors a higher pCR rate (ypT0 ypN0) rate was achieved with *nab*-paclitaxel compared to *sb*-paclitaxel. The pCR rates for *nab*-paclitaxel vs. *sb*-paclitaxel were 192/509 (37.7%) vs. 146/506 (28.9%) in the SPARC-negative (continuity corrected χ^2 -test $p=0.0034$) and 41/97 (42.3%) vs. 28/94 (29.8%) in the SPARC-overexpressing cohort ($p=0.10$; interaction $p=0.66$). In patients with high



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Ki67 (>20%) tumors pCR rate was 184/418 (44.0%) vs. 138/415 (33.3%, $p=0.0018$) and in patients with low Ki67 49/188 (26.1%) vs. 36/185 (19.5%, $p=0.16$; interaction $p=0.78$). In patients with HR-positive tumors pCR rate was 122/408 (29.9%) vs. 106/415 (25.5%, $p=0.19$) and in patients with HR-negative tumors 111/198 (56.1%) vs. 68/185 (36.8%, $p=0.00023$; interaction $p=0.029$). In patients with HER2+ tumors 123/199 (61.8%) achieved a pCR with *nab*-paclitaxel vs. 106/197 (53.8%) with *sb*-paclitaxel ($p=0.13$; interaction $p=0.31$). According to the biological subtype, patients with HR+/HER2-tumors had a pCR in 43/268 (16.0%) vs. 32/266 (12.0%, $p=0.23$), with TNBC in 67/139 (48.2%) vs. 36/137 (26.3%, $p=0.00027$), with HER2+/HR+ in 79/140 (56.4%) vs. 74/149 (49.7%, $p=0.30$) and with HER2+/HR- in 44/59 (74.6%) vs. 32/48 (66.7%, $p=0.49$; interaction $p=0.20$).

There was no significant difference in the rate of breast conserving surgery (415/597 (69.5%, 9 patients had no surgery) vs. 414/595 (69.6%, 5 no surgery), $p=1.00$), in the rate of the reduced axilla surgery (253/578 (43.8%) versus 260/582 (44.7%), $p=0.80$) and in the clinical response before surgery (495/606 (81.7%) versus 475/600 (79.2%), $p=0.3$).

Table: Primary Efficacy Endpoint: pCR (ypT0 ypN0) by Randomization Period (mITT Population)

	Randomization							
	Before 28 MAR 2013				On or After 28 MAR 2013			
Parameter	<i>sb</i> -P. (N = 226) n (%)	<i>nab</i> -P. (N = 229) n (%)	Overall (N = 455) n (%)	p-value	<i>sb</i> -P. (N = 374) n (%)	<i>nab</i> -P. (N = 377) n (%)	Overall (N = 751) n (%)	p-value
pCR								
Yes	53 (23.5)	77 (33.6)	130 (28.6)	0.022	121 (32.4)	156 (41.4)	277 (36.9)	0.013
No	173 (76.5)	152 (66.4)	325 (71.4)		253 (67.6)	221 (58.6)	474 (63.1)	
% CI	95 (17.9%, 29.0%)	(27.5%, 39.7%)	(24.4%, 32.7%)		(27.6%, 37.1%)	(36.4%, 46.4%)	(33.4%, 40.3%)	

CI = confidence interval; mITT = modified intent-to-treat set; *nab*-P. = *nab*-Paclitaxel; pCR = pathological complete response; *sb*-P. = *sb*-Paclitaxel.

After 464 patients were already randomized (60th patient recruited on 01-Oct-2012, finished taxane therapy on 03-Jan-2013, results presented to the Independent Data Monitoring Committee (IDMC) and SC decision taken 28-Mar-2013; average monthly recruitment 67 patients) the *nab*-paclitaxel dose was reduced. The pCR rates in patients randomized before 28-March-2013 and started treatment (n=455) were 77/229 (33.6%) for *nab*-paclitaxel vs. 53/226 (23.5%) for *sb*-paclitaxel, in patients randomized on or after 28-March-2013 and started treatment (n=751) 156/377 (41.4%) vs. 121/374 (32.4%), respectively.



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Name of finished product: Abraxane Various products of <i>sb</i> -paclitaxel Perjeta	Volume:	
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<p>Safety Results:</p> <p>Toxicities were more frequent with <i>nab</i>-paclitaxel. Overall, 283/1206 (23.5%) patients reported at least one serious adverse event irrespective of the relationship to the underlying treatment, 156/605 (258%) in the <i>nab</i>-paclitaxel arm and 127/601 (21.1%) in the <i>sb</i>-paclitaxel arm ($p=0.057$). Three deaths occurred in the <i>nab</i>-paclitaxel arm during EC-treatment (1 sepsis, 1 diarrhoea, 1 accident) vs. one death in the <i>sb</i>-paclitaxel arm during paclitaxel plus trastuzumab/pertuzumab treatment (cardiac failure).</p> <p>Anaemia any grade was observed in 560/605 (92.6%) of patients in the <i>nab</i>-paclitaxel arm and in 528/601 (88.1%) in the <i>sb</i>-paclitaxel arm ($p=0.011$), grade 3-4 anemia in 13/605 (2.1%) and 4/601 (0.7%, $p=0.048$), respectively.</p> <p>Neutropenia any grade was reported in 531/605 (87.9%) in the <i>nab</i>-paclitaxel and 487/601 (81.3%) in the <i>sb</i>-paclitaxel arm ($p=0.0018$), grade 3-4 neutropenia in 368/605 (60.9%) and 371/601 (61.9%), respectively and febrile neutropenia in 28/605 (4.6%) in the <i>nab</i>-paclitaxel and in 24 (4.0%) in the <i>sb</i>-paclitaxel arm.</p> <p>Non-haematological toxicities for <i>nab</i>-paclitaxel-EC versus <i>sb</i>-paclitaxel-EC were: fatigue any grade 492/605 (81.3%) versus 456/601 (75.9%, $p=0.025$), grade 3 30/605 (5.0%) versus 25/601 (4.2%, $p=0.58$); diarrhea any grade 309/605 (51.1%) versus 265/601 (44.1%, $p=0.016$), grade 3-4 20/605 (3.3%) versus 17/601 (2.8%, $p=0.74$); skin rash (maculo-papular) any grade 202/605 (33.4%) versus 143/601 (23.8%, $p=0.00028$), grade 3 7/605 (1.2%) versus 4/601 (0.7%, $p=0.55$); hand-foot syndrome any grade 171/605 (28.3%) versus 107/601 (17.8%, $p<0.0001$), grade 3 13/605 (2.1%) versus 6/601 (1.0%, $p=0.16$); myalgia any grade 187/605 (30.9%) versus 150/601 (25.0%, $p=0.025$), grade 3 2/605 (0.3%) versus 0% ($p=0.50$); PSN any grade 514/605 (85.0%) versus 392/601 (65.2%, $p<0.0001$), grade 3-4 63/605 (10.4%) versus 17/601 (2.7%, $p<0.0001$). Median time to resolve grade 2-4 PSN to grade 1 was 8.4 weeks for <i>nab</i>-paclitaxel versus 7.1 weeks for <i>sb</i>-paclitaxel ($p=0.43$); for grade 3-4 PSN 17.0 versus 9.1 weeks ($p=0.13$). After the amendment the rate of grade 3-4 PSN was 8.1% (31/385) for patients starting with 125 mg/m² <i>nab</i>-paclitaxel compared to 14.5% (32/220) for patients starting with 150 mg/m² <i>nab</i>-paclitaxel and 2.7% (16/601) for patients treated with 80 mg/m² <i>sb</i>-paclitaxel.</p> <p>The taxane dose had to be reduced in 182/605 (30.1%) patients in the <i>nab</i>-paclitaxel arm versus 75/601 (12.5%) in the <i>sb</i>-paclitaxel arm ($p<0.0001$); of them in 34 (5.6%) versus 15 (2.5%, $p=0.0080$) due to haematological toxicity and 131 (21.7%) versus 53 (8.8%, $p<0.0001$) due to non-haematological toxicities.</p> <p>CONCLUSIONS:</p> <p>GeparSepto is the first trial in primary breast cancer directly comparing the two taxanes given weekly and one of the largest studies replacing an established agent. The trial showed a significantly higher pCR rate using weekly <i>nab</i>-paclitaxel compared with weekly <i>sb</i>-paclitaxel for patients with primary breast cancer. Especially patients with TNBC had a major benefit from using <i>nab</i>-paclitaxel resulting in pCR rates 20% higher than with <i>sb</i>-paclitaxel. The excellent results in TNBC support the use of <i>nab</i>-paclitaxel as a partner and backbone therapy for many new agents (e.g. checkpoint inhibitors, PARP inhibitors).</p> <p>Date of the Synopsis: 26-Nov-2015 / 08-Nov-2018</p>		