

Abstract #533: Clinical Trial Testing Superiority of Combination Plinabulin and Pegfilgrastim vs Pegfilgrastim Alone in Patients with Breast Cancer Treated with High Febrile Neutropenia Risk Chemotherapy: Final Results of the Phase 3 Chemotherapy-Induced Neutropenia Prevention Trial (PROTECTIVE-2)

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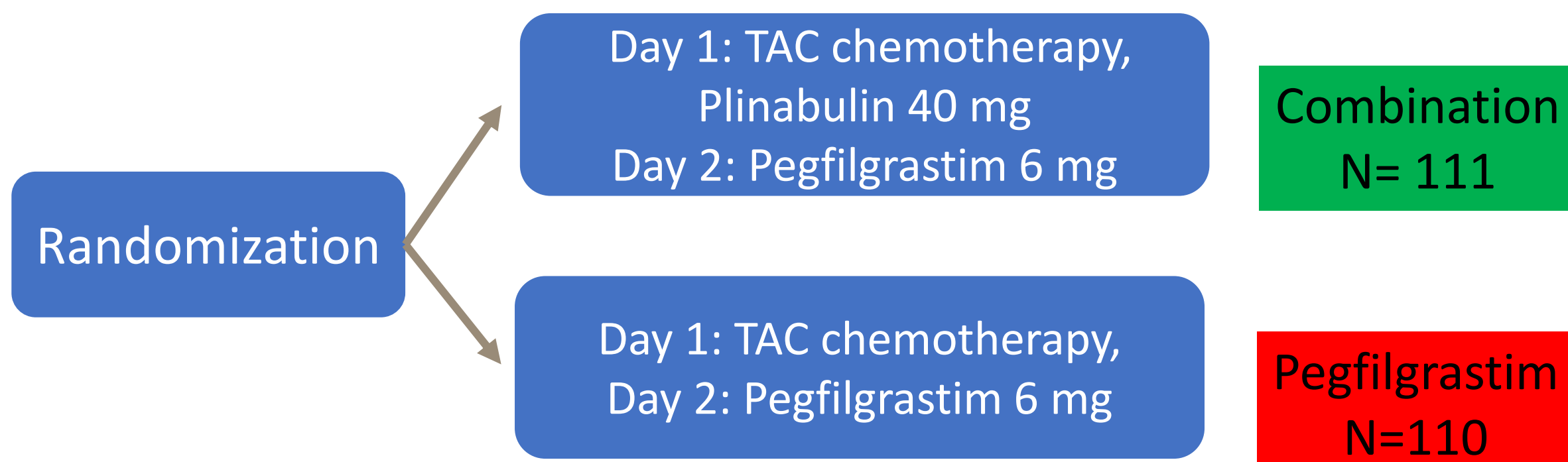
BACKGROUND

Plinabulin, is a first-in-class, selective immunomodulating microtubule-binding agent (SIMBA)

- Chemotherapy-induced neutropenia (CIN) protection
- Reduces febrile neutropenia, hospitalizations and other complications of myelosuppressive chemotherapy
- Plinabulin also has anti-cancer activity

METHODS

PROTECTIVE-2 (NCT03294577) is a global, multicenter, randomized, double-blind study to evaluate severe neutropenia in early-stage breast cancer patients.



PRIMARY ENDPOINT (tested for superiority):

- Percentage of patients who had no days of severe neutropenia (DSN) in Cycle 1.

SECONDARY ENDPOINTS:

- Mean absolute neutrophil count (ANC)nadir in Cycle 1.
- Access Incidence of Febrile Neutropenia (NCCN Definition).
- To compare proportion of patients who needed bone pain medication.

Combination Plinabulin/Pegfilgrastim

VS.

Pegfilgrastim alone

- Superior CIN protection
- ✓ Higher ANC count (~ 100% higher) in the combination is correlated with ~ 50% reduction in the incidence and severity of FN, and its related hospitalization, and chemo dose reduction/change in later cycles
- No added toxicity
- Reduced severity of treatment related adverse events
- ✓ >20% reduction in Grade 4 TEAE
- ✓ Bone pain AE frequency 18.0% (combination) vs 30.0% (pegfilgrastim), p=0.03



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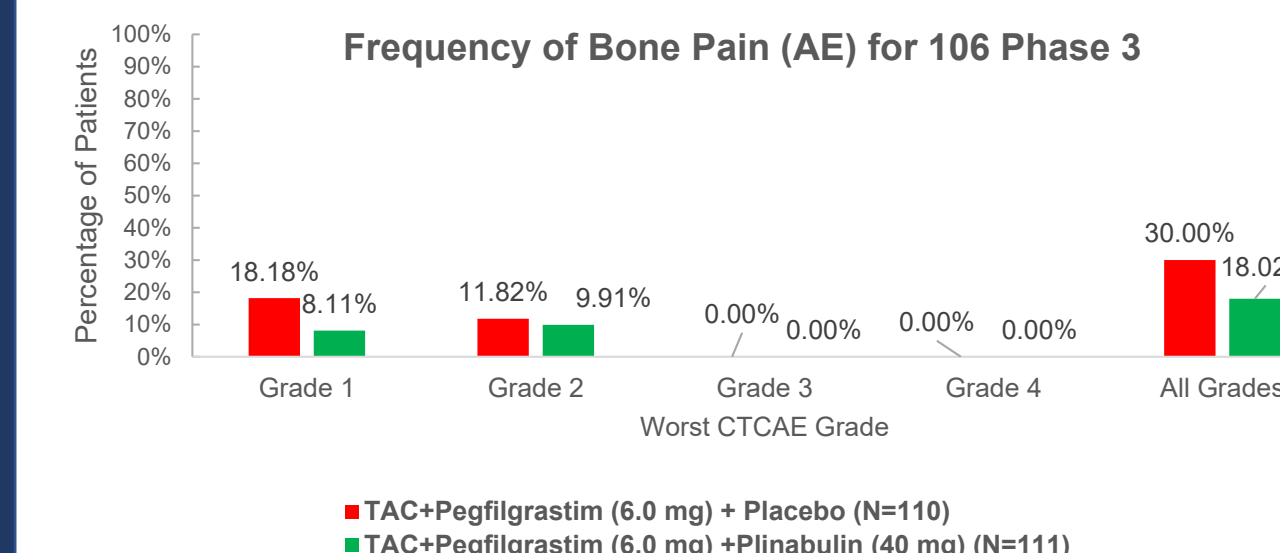
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RESULTS

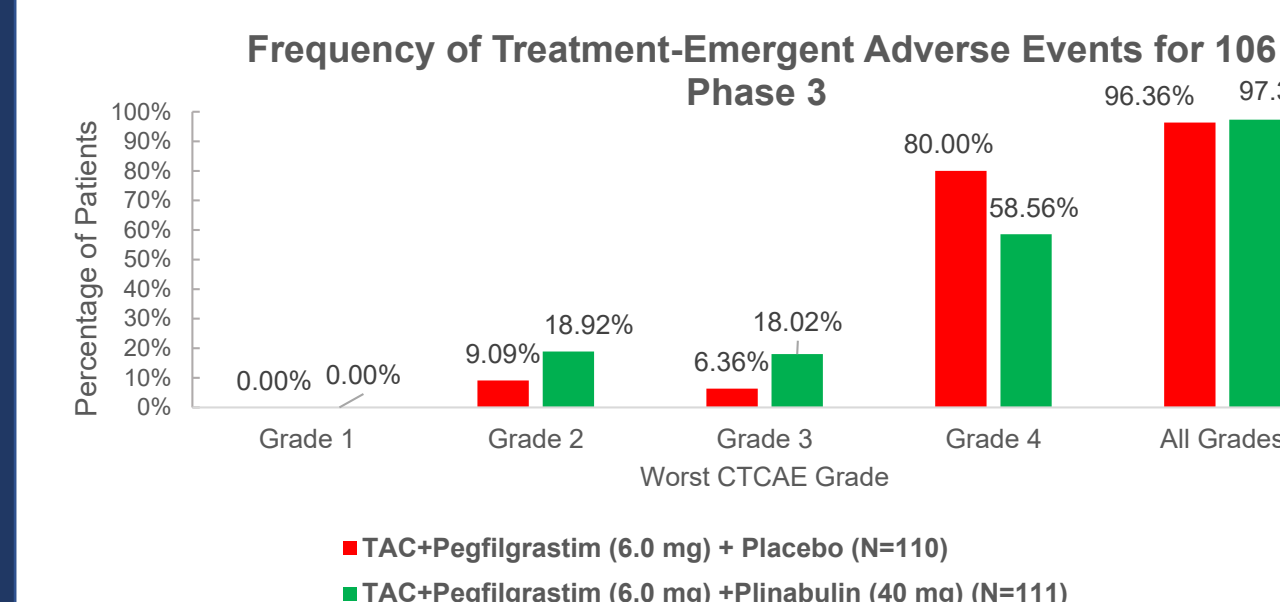
ANC Nadir	Pegfilgrastim 6 mg N=110	Plinabulin 40 mg + Pegfilgrastim 6 mg N=111
Mean nadir for FN patients (x10 ⁹ cells/L)	0.06	0.13
Mean nadir for all patients (x10 ⁹ cells/L)	0.31	0.54

ANC benefit of the combination improves clinical benefit (~50% better)

	Pegfilgrastim 6 mg N=110	Plinabulin 40 mg + Pegfilgrastim 6 mg N=111
Incidence of FN by grade, (n) %	Total: 6.3% (n=7) Grade 3: 2.7% (n=3) Grade 4: 3.6% (n=4)	Total: 3.6% (n=4) Grade 3: 2.7% (n=3) Grade 4: 0.9% (n=1)
Duration of FN (days)	2.28 days	1.25 days
Hospitalization, %	100%	75%
Duration of hospitalization (days)	7.14 days	3.75 days
Change of chemotherapy dose and/or regimen in later cycles, %	6.3%	2.7%



Fewer bone pain AEs seen by Combining Plinabulin with Pegfilgrastim (p=0.03)



An improved Safety Profile seen by Combining Plinabulin with Pegfilgrastim

FUTURE DIRECTIONS FOR RESEARCH

Explore

- Plinabulin activity in other solid tumors and other chemotherapy
- Hematologic malignancy
- Synergy with I/O agents and radiation therapy
- Ongoing Pediatric sarcoma study