

# Venous thromboembolism in cancer patients – an Elephant in the room

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Proffered Paper 368 O

Discussant:

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# Methods:

- Prospective Observational study
  - 507 newly diagnosed ambulatory patients
  - May 2014 to July 2015.
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- Bilateral lower limb venous Doppler to detect Cancer associated silent VTE.
  - Thrombus detected during imaging as part of staging.
  - Patients diagnosed with inherited thrombophilias, Recurrent Cancer and with prior VTE were excluded

# Demographics

- VTE: 92/507 patients: 62 incidental, 30 symptomatic
- symptomatic
- VTE/HCC            13/15 (86%)            3
- VTE/gastric        13/78 (16%)            10
- VTE/Pancreas      9/12 (75%)            7
- VTE/Lung            8/62 (13%)            5
- VTE/CRC            7/48 (14%)            4
- Index VTE: portal vein 25, IVC 18, P.E 4, Sup. mesenter. vein: 4

# Comments and Questions:

New patients:

18% of pts with an unexpected distribution of VTE: Incidental twice symptomatic cases.

- very high rate of VTE, incidental as well as symptomatic
- Very high rate of portal vein and ICV thrombosis, for 4 pulmonary emboli

? Stage or tumor mass of patients with VTE vs non VTE

? Difference on biology-laboratory data of these patients: thrombophilic data: fibrinogen, CRP, d-dimer, platelet count....

# Impression:

- VTE is a major problem, especially in advanced cancer patients.
- In this setting if confirmed, treatment indications would need to be adapted. The benefit/risk ratio might be shifted to more therapy for VTE but also for prevention.
- Confirmatory data would be welcome.

# Development of a comprehensive risk scoring system for prediction of chemotherapy-induced severe neutropenia

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## Late Breaking Abstract 1(LBA1)

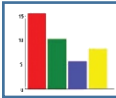
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## Results

- Data from **212** patients were prospectively collected
- **153** patients were included in the final analysis
- **26** patients experienced grade 4 neutropenia

### Characteristics of components in multivariate model

Predictor	Odds Ratio	Regression Coefficient	P-value	Score
High-Risk Regimen without prophylactic G-CSF	36.59	3.6	<0.001	2
Intermediate-Risk Regimen without prophylactic G-CSF	8.09	2.09	0.011	1
GFR <60	27.66	3.32	<0.001	2
Abnormal Ferritin	4.9	1.59	0.020	1
Elevated Haptoglobin	5.69	1.73	0.030	1
BMI under 23	4.73	1.55	0.027	1

# MASCC Risk Score for Febrile Neutropenia

Klastersky J. et al. JCO 2000,18:3038

Characteristic	Weight
Burden of illness: no or mild symptoms	5
No hypotension	5
No chronic obstructive pulmonary disease	4
Solid tumor or no previous fungal infection	4
No dehydration	3
Burden of illness: moderate symptoms	3
Outpatient status	3
Age < 60 years	2

NOTE. Points attributed to the variable “burden of illness” are not cumulative. The maximum theoretical score is therefore 26.

**N=756 pts -> 1100 pts, PPV 133/142 patients: 94%**



# Febrile Neutropenia vs Neutropenia

Klastersky J. et al. JCO 2000,18:3038

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ESMO Asia 2015, LBA1 B. Mofid

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# Questions:

- How many of the 153 patients had **febrile** neutropenia?
- Were these patients all in the predicted neutropenia subgroup?
- Were there patients with < grade 4 neutropenia who had FN
- Independent from the study, do you apply a risk score for febrile neutropenia?

## **Severe chronic primary neutropenia in adults: report on a series of 108 patients.**

Sicre de Fontbrune F<sup>1</sup>, Moignet A<sup>2</sup>, Beaupain B<sup>3</sup>, Suarez F<sup>4</sup>, Galicier L<sup>5</sup>, Socié G<sup>1</sup>, Varet B<sup>4</sup>, Coppo P<sup>6</sup>, Michel M<sup>7</sup>, Pautas C<sup>8</sup>, Oksenhendler E<sup>5</sup>, Lengline E<sup>9</sup>, Terriou L<sup>10</sup>, Moreau P<sup>11</sup>, Chantepie S<sup>12</sup>, Casadevall N<sup>6</sup>, Michot JM<sup>13</sup>, Gardembas M<sup>14</sup>, Michallet M<sup>15</sup>, Croisille L<sup>16</sup>, Audrain M<sup>17</sup>, Bellanné-Chantelot C<sup>18</sup>, Donadieu J<sup>3</sup>, Lamy T<sup>2</sup>; French Severe Chronic Neutropenia Registry.

N= 108 pts. Median age 28,3y., **ANC at diagnosis: 400**, 33.8% neutrophil antibodies not associated with any clinical or other characteristic. No patient died or has a hematological malignancy. 44 severe bacterial infections in 22 patients over 8.3 years of follow-up. 50 patients had G-CSF sporadically or continuously, response 96%

**The only predictive factor for occurrence of severe bacterial infections was an ANC <200 at diagnosis.**

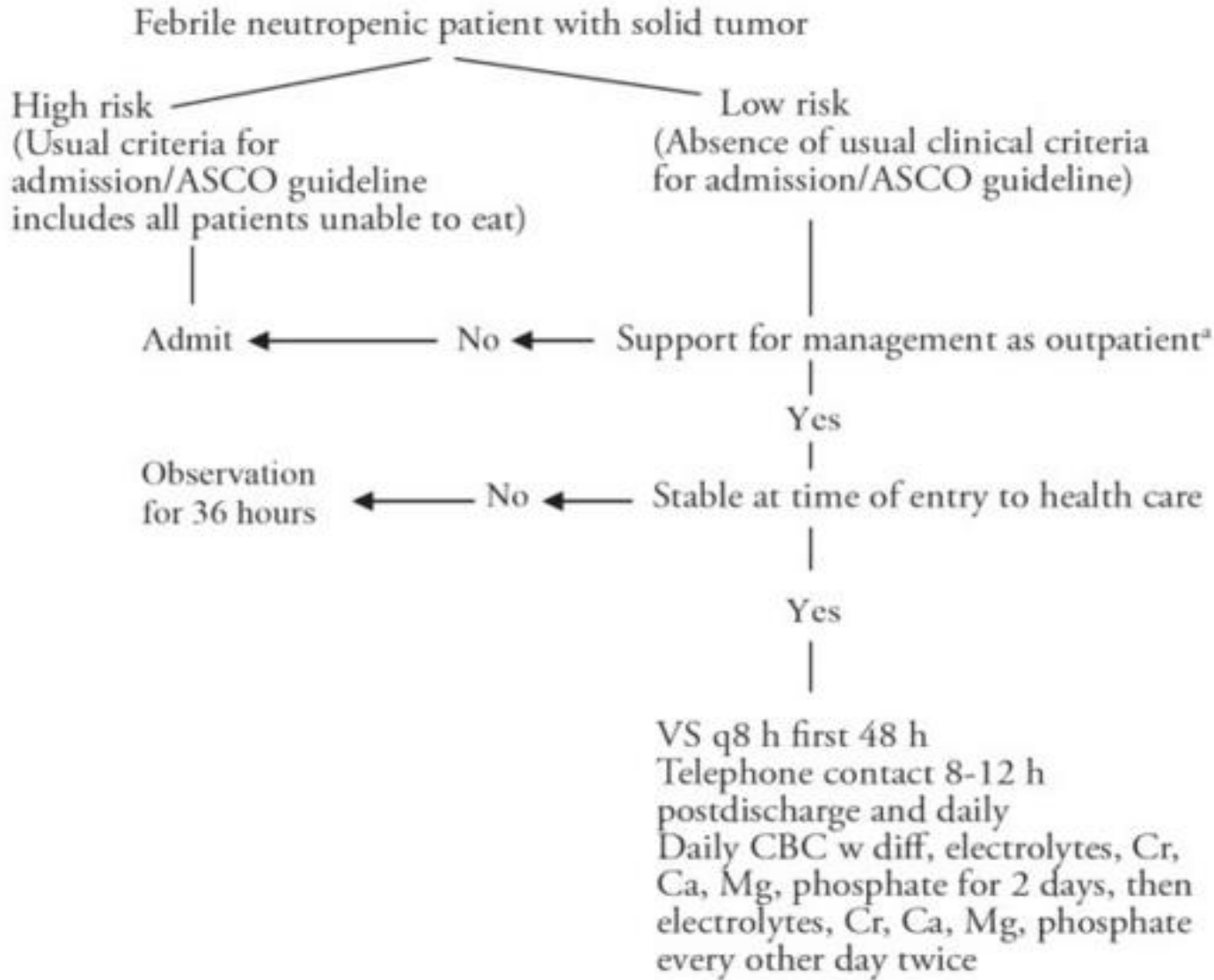
## Prediction of Serious Complications in Patients With Seemingly Stable Febrile Neutropenia: Validation of the Clinical Index of Stable Febrile Neutropenia in a Prospective Cohort of Patients From the FINITE Study

Alberto Carmona-Bayonas, Paula Jiménez-Fonseca, Juan Virizuela Echaburu, Maite Antonio, Carme Font, Mercè Biosca, Avinash Ramchandani, Jerónimo Martínez, Jorge Hernando Cubero, Javier Espinosa, Eva Martínez de Castro, Ismael Ghanem, Carmen Beato, Ana Blasco, Marcelo Garrido, Yaiza Bonilla, Rebeca Mondéjar, María Ángeles Arcusa Lanza, Isabel Aragón Manrique, Aránzazu Manzano, Elena Sevillano, Eduardo Castañón, Mercé Cardona, Elena Gallardo Martín, Quionia Pérez Armillas, Fernando Sánchez Lasheras, and Francisco Ayala de la Peña

**Table 1.** CISNE Score

Characteristic	Points
ECOG PS $\geq$ 2	2
SIH	2
COPD	1
Chronic cardiovascular disease	1
Mucositis NCI grade $\geq$ 2	1
Monocytes $<$ 200 per $\mu$ L	1

Abbreviations: CISNE, Clinical Index of Stable Febrile Neutropenia; COPD, chronic obstructive pulmonary disease; ECOG PS, Eastern Cooperative Oncology Group performance status; NCI, National Cancer Institute; SIH, stress-induced hyperglycemia.



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RESEARCH

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# The impact of chemotherapy dose intensity and supportive care on the risk of febrile neutropenia in patients with early stage breast cancer: a prospective cohort study

Eva Culakova<sup>1</sup>, Marek S Poniewierski<sup>1</sup>, Debra A Wolff<sup>2</sup>, David C Dale<sup>3</sup>, Jeffrey Crawford<sup>4</sup> and Gary H Lyman<sup>1,3\*</sup>

Definitions: severe neutropenia: ANC  $\leq$  500,  
febrile neutropenia: fever + ANC  $\leq$  1000

# Conclusion

- Interesting study, raising new and old questions.
- Neutropenia alone is supposed to be a predictor (+/-) of infection. Is it relevant if all patients will be hospitalized? Is this useful if the most used score may miss 10 % of infections in ambulatory stable patients?
- Recent data question the MASCC score and as patients and treatments are very heterogeneous, predictions become very difficult. Additional parameters might have to be added and some seem to be readily available at no additional effort