SESSION: ITP IN SPECIFIC SITUATIONS
(SECONDARY ITP, THROMBOSIS IN PATIENTS WITH ITP, ADOLESCENCE)

Introduction

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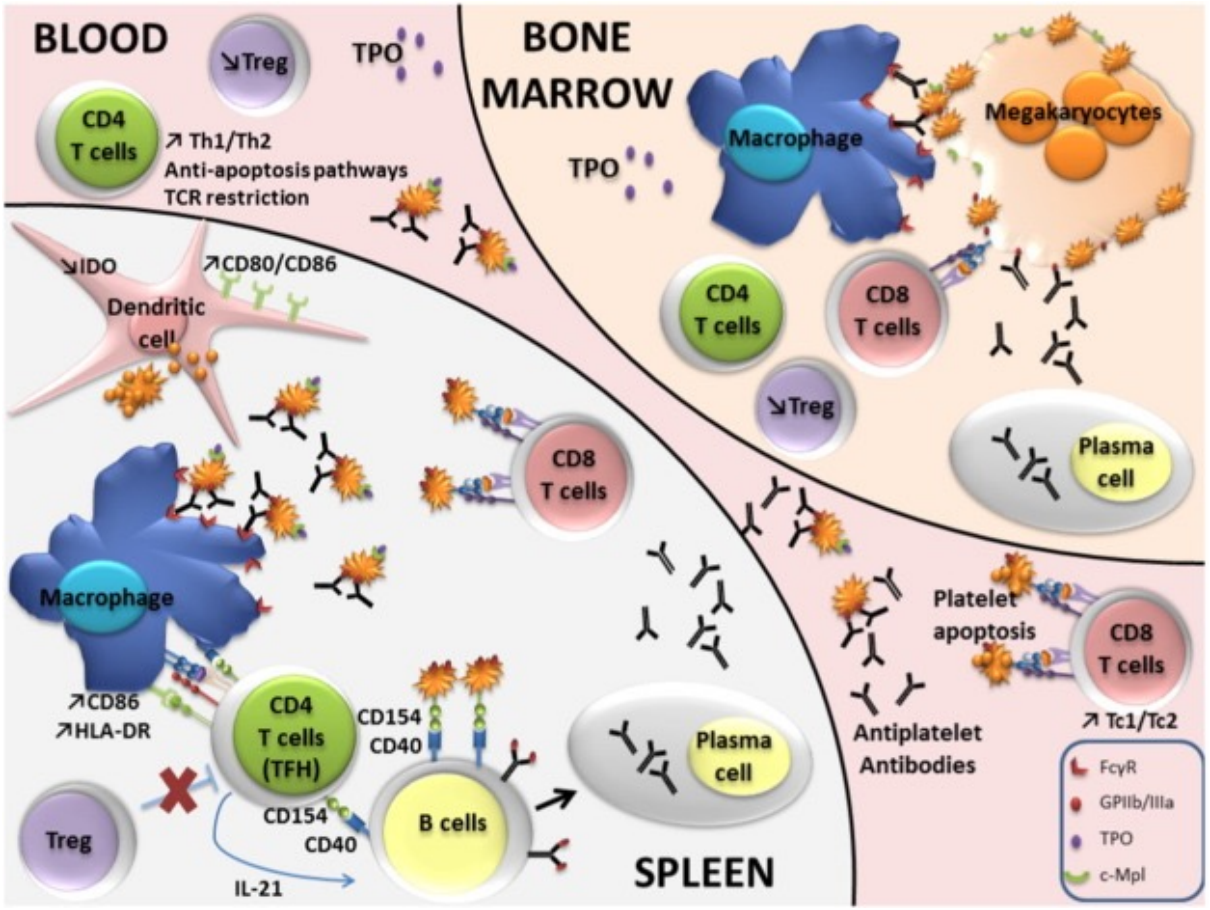
Disclosures of Valerio De Stefano

Company name	Research support	Speakers bureau	Advisory board
AbbVie		X	
Alexion	X	X	
Amgen		X	
Argenx			X
AOP Health			X
Bristol Myers Squibb		X	X
Glaxo Smith Kline		X	X
Grifols		X	X
Leo Pharma		X	
Novartis	X	X	X
Novo Nordisk		X	
Sanofi		X	
SOBI		X	X
Takeda		X	X

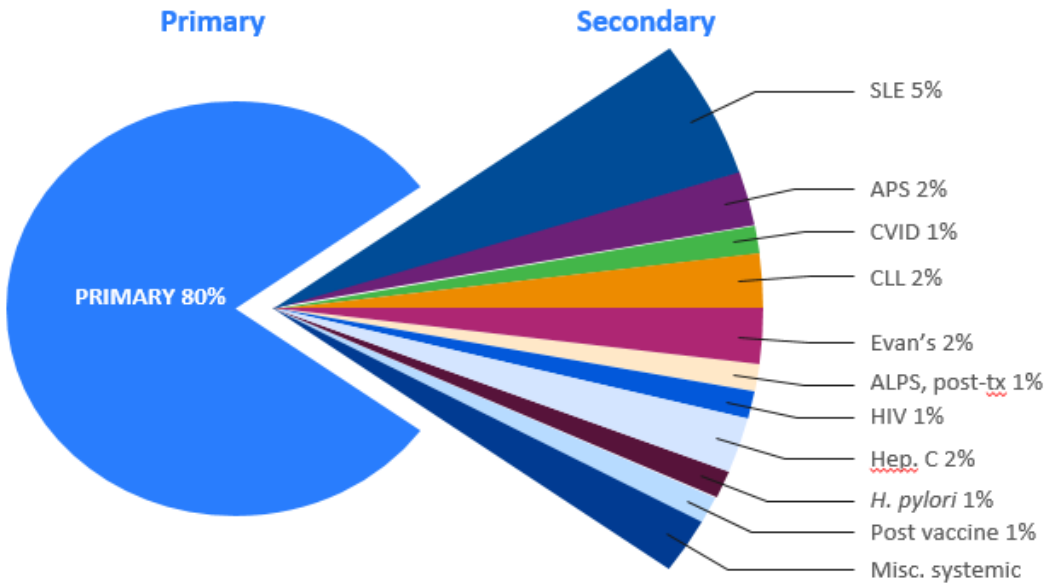
ITP is an heterogeneous disease

- ***Pathophysiology is heterogeneous***
- ***Nosography is heterogeneous***
- ***Patients are heterogeneous***
- ***Treatment choices are heterogeneous***



Audia S et al, Autoimmunity Rev 2017

Estimated fraction of the various forms of secondary ITP based on clinical experience



Cines DB et al. Blood 2009;113:6511–6521

ALPS, autoimmune lymphoproliferative syndrome; APS, antiphospholipid syndrome; CLL, chronic lymphocytic leukemia; CVID, common variable immune deficiency; posttx, post–bone marrow or solid organ transplantation; SLE, systemic lupus erythematosus

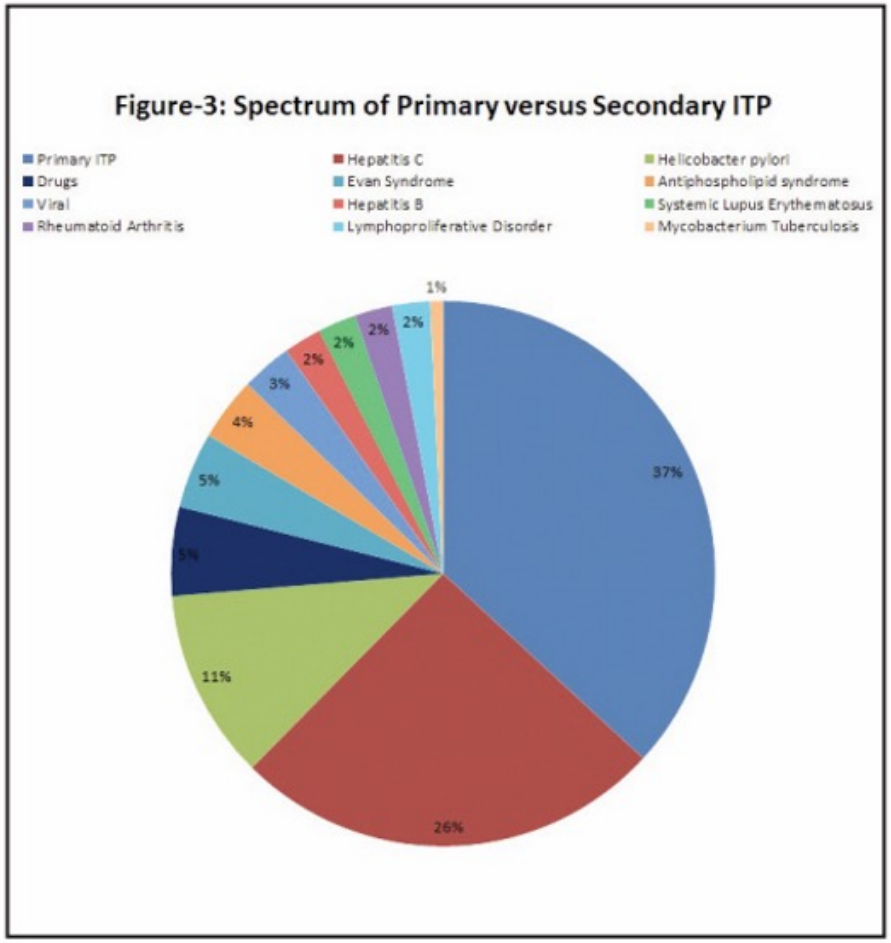
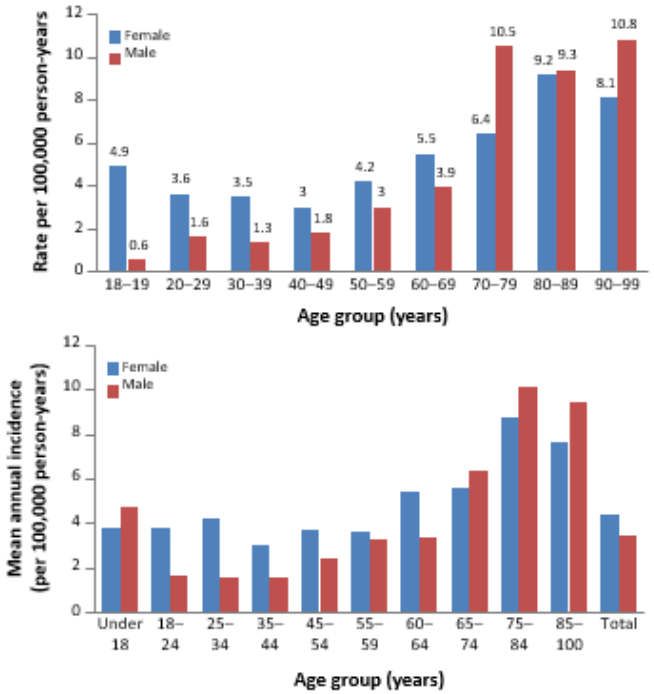


Fig. 3: Spectrum of primary versus secondary ITP.

Sultan, Med J Malaysia 2016

Incidence of ITP by age[1,2]



NS, not significant; OR, odds ratio.

High risk of bleeding in older ITP patients[3]

Subgroup analysis of the odds of hemorrhage in 117 patients with ITP

Category	Number of patients	Total person-years of observation	Number of events	Person-time incidence rates	OR	p value
Age, years						
< 40	54	257	1	0.4	1.0	-
40–60	32	177	2	1.1	2.8	NS
> 60	31	67	7	10.4	28.9	< 0.010
Previous hemorrhagic events						
No	111	468	4	0.8	1.0	
Yes	6	33	6	18.2	27.5	< 0.0005
Hypertension						
No	99	432	8	1.8	1.0	
Yes	18	69	2	2.9	1.6	NS
Overt co-existent organic lesion						
No	96	409	7	1.7	1.0	
Yes	21	92	3	3.3	1.9	NS

1. Abrahamson PE, et al. Eur J Hematol. 2009;83:83-9.
2. Schoonen WM, et al. Br J Haematol. 2009;145:235-44.
3. Cortelazzo S, et al. Blood. 1991;77:31-3.

Risk factors for venous and arterial thromboembolism

Ruggeri M, et al. J Thromb Haemost. 2014;12:1266-73

Multicenter, retrospective cohort of **986 ITP patients**

The annualized rates for **1,000 patient-years** were **11.4, 3.9,** and **7.1** for **total, venous, and arterial thrombosis, respectively**
Venous and arterial thrombosis at **5 years: 1.4 %** and **3.2 %**

	HR (95% CI)[1]		
Risk factor	**All events**	**Venous events**	**Arterial events**
Male vs female	0.8 (0.4–1.6)	0.6 (0.2–2.0)	1.1 (0.4–2.5)
Age			
< 40 years, n = 322 (33%)	1	1	1
40–60 years, n = 285 (29%)	1.7 (0.4–6.8)	1.4 (0.2–8.2)	2.1 (0.2–21.2)
> 60 years, n = 379 (38%)	5.8 (1.6–21.1)	2.7 (0.5–16.2)	12.0 (1.5–98.5)
Number of risk factors present at diagnosis[a]			
No risk factors	1	1	1
1	1.6 (0.7–3.9)	1.8 (0.5–7.0)	1.6 (0.5–5.0)
2	1.9 (0.7–5.3)	0.8 (0.1–8.8)	2.6 (0.7–8.9)
Three or more	13.7 (4.5–41.1)	11.8 (2.0–70.7)	14.9 (3.6–60.6)
Prednisone vs no prednisone use	3.3 (1.0–11.0)	2.2 (0.5–10.4)	5.3 (0.9–40.6)
Splenectomy vs no splenectomy	3.5 (1.6–7.6)	4.1 (1.1–15.7)	3.2 (1.2–8.6)

- **Individual risk factors**
- Older age
- Vascular risk factor
- Steroids
- Splenectomy

Note: administration of high dose-immunoglobulins has been occasionally associated with VTE[2–4]

[a]Individual risk factors were: treated diabetes mellitus, treated hypercholesterolemia, treated arterial hypertension, smoking, atrial fibrillation, valvular disease, and coronary disease.
HR, hazard ratio.

1..Schiavotto C, et al. Haematologica. 1993;78:35-40.
2. Paran D, et al. Blood Coagul Fibrinolysis. 2005;16:313-8.
3. Tam P-Y, et al. Am J Haematol. 2008;83:323-5.

Clinical parameters for predicting safety to treatment with TPO-RAs

In 121 ITP patients receiving TPO-Ras during 329.3 patient-years, 15 patients experienced 17 thromboses. These included 9 thrombotic events (6 pulmonary embolism, 3 venous thrombosis), and 8 ischemic episodes (3 stroke, 2 transient ischemic attack, 1 angina pectoris, 1 myocardial infarction, 1 peripheral ischemic event). The annualized risk was 4.2 and 5.9 VE/100 patient-years in romiplostim and eltrombopag treated patients, respectively (median 5.2).

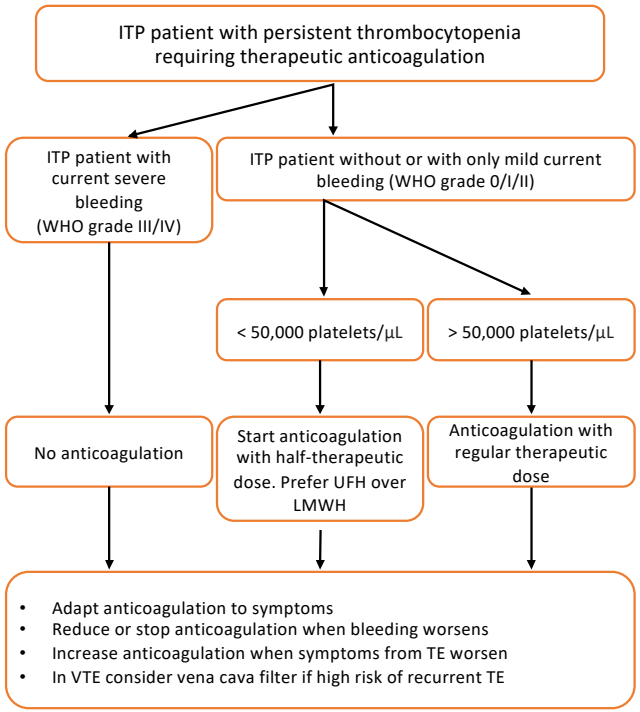
	OR	95% CI	*P*
Univariate analysis			
Splenectomy	3.3	1.11–10.09	0.032
Chronic disease	7.8	0.99–61.83	0.051
Previous malignancy	17.2	3.57–82.65	<0.001

Factors associated with the occurrence of a VE were previous splenectomy (53.3% *vs*. 25.5%, $P = 0.026$), chronic phase of the disease (93.3% *vs*. 64.1%, $P = 0.024$), and a personal history of malignancy (33.0% *vs*. 2.8%, $P < 0.001$).

Table 3. Univariate logistic regression model for factors related to vascular events during TPO-RA therapy. OR indicates the probability of having a vascular event under TPO-RA therapy in the presence of a specific factor. Abbreviations: TPO-RA, thrombopoietin receptor agonist.

Lozano ML et al, Sci Reports 2019

ITP patients requiring anticoagulation: recommendations



DVT, deep vein thrombosis; UFH, unfractionated heparin.

Immune Thrombocytopenia Patients Requiring Anticoagulation—Maneuvering Between Scylla and Charybdis

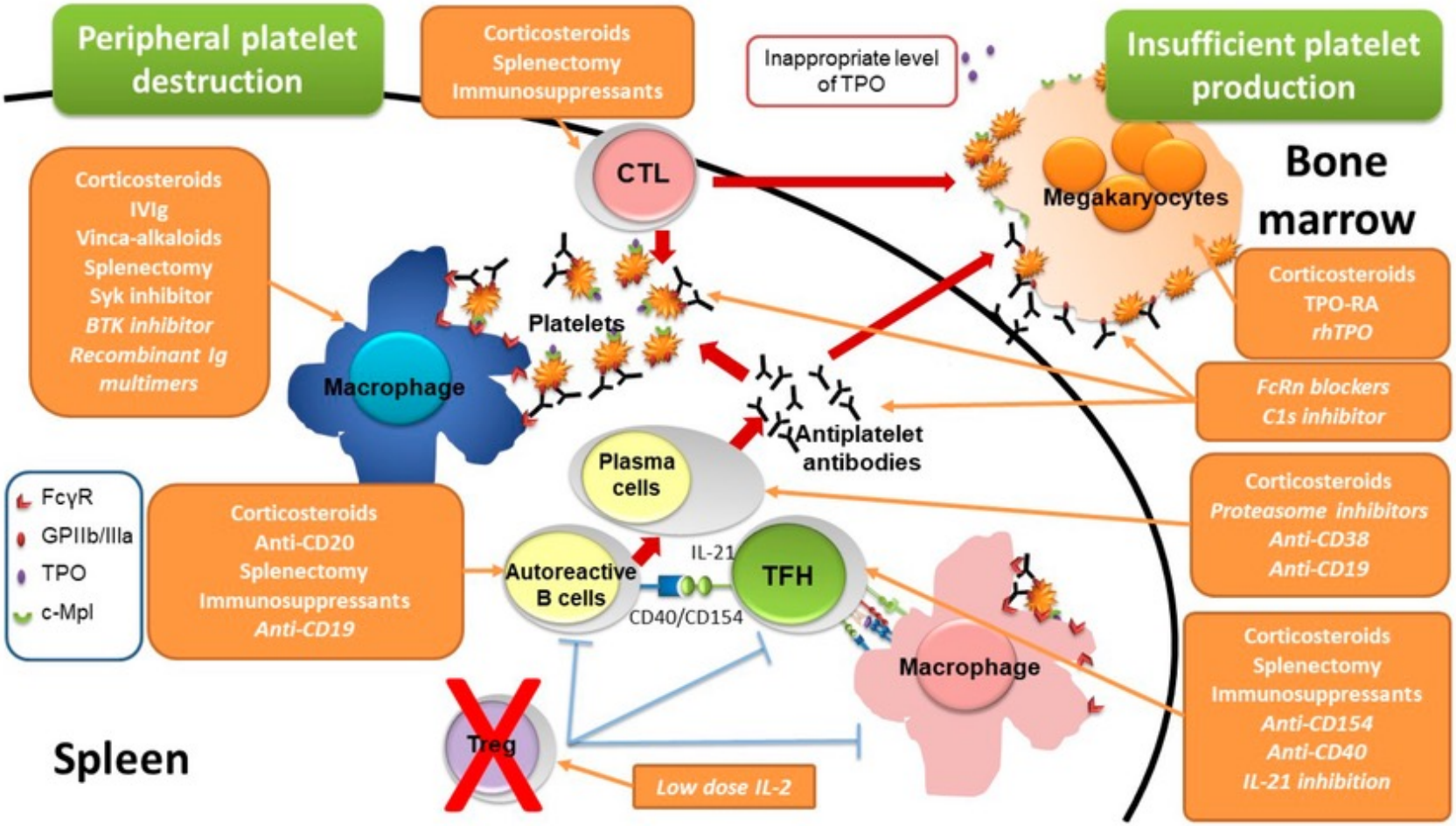
Axel Matzdorff,[a] and Juerg-Hans Beer[b]

Immune thrombocytopenia (ITP) is no longer a disorder of young people. Half of the patients are older than 50 and comorbidities become more common with age. Anticoagulation has to be discussed when an ITP patient develops atrial fibrillation, venous or arterial thromboembolism, myocardial infarction, or stroke. At the same time low platelet counts often prohibit therapeutic anticoagulation. Guidelines do not give guidance for these situations. This article summarizes experiences from case reports and small series and suggests an approach to ITP patients with thrombocytopenia and an indication for anticoagulation.
Semin Hematol 50:S83–S88.

Lifestyles are heterogeneous

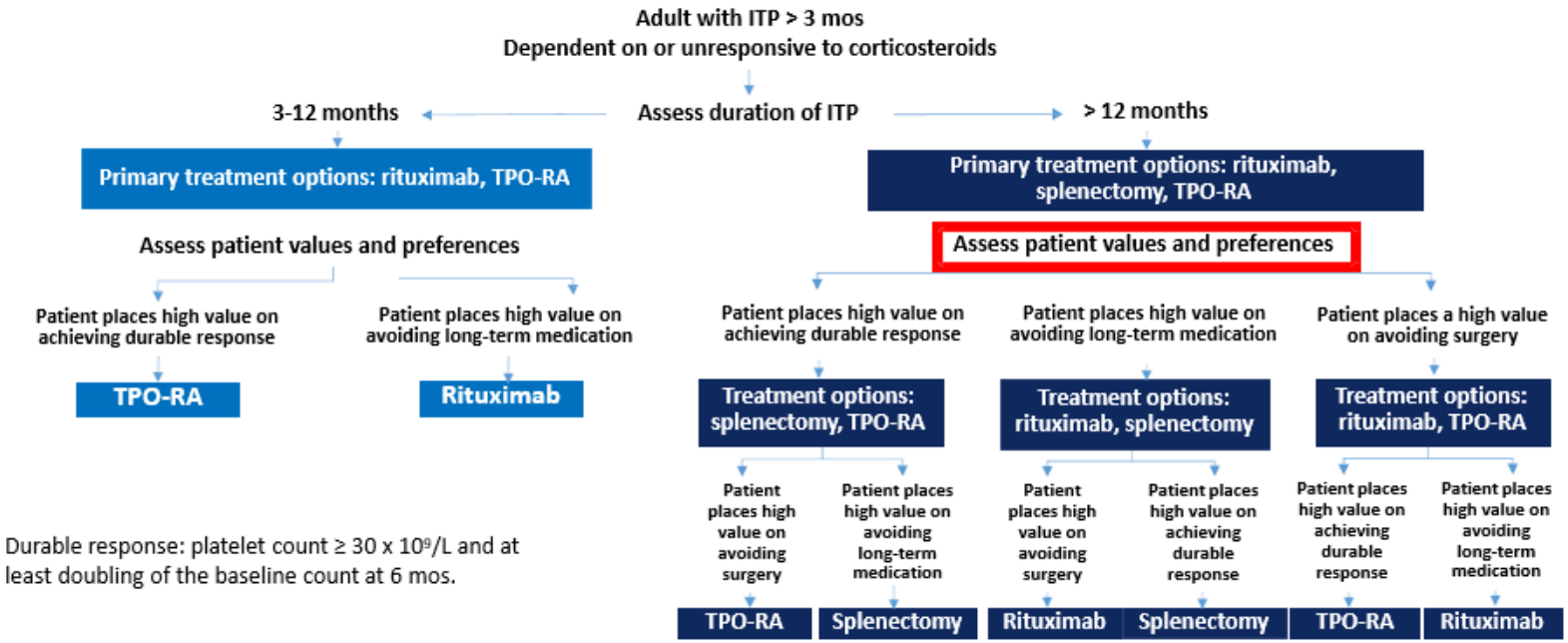
They share a diagnosis of ITP, not much more

Help ITP Warriors like me, beat ITP!



Audia S et al, J Clin Med 2021

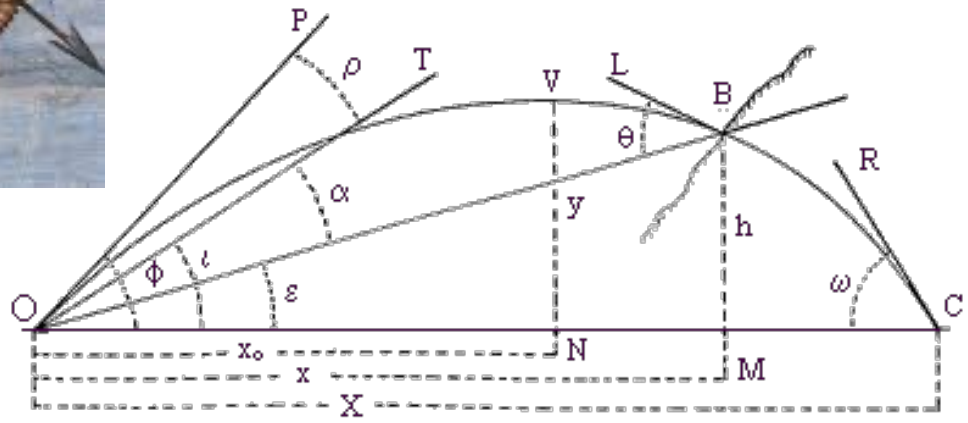
ASH- Algorithm for the selection of second-line therapy in adults with ITP



Durable response: platelet count ≥ 30 x 10^9/L and at least doubling of the baseline count at 6 mos.

Neunert. Blood Advances. 2019;3:3829.

Does a risk profile for thrombosis should prompt for a separate treatment option ?



our therapeutic target can be obtained by evaluating a very complex ballistics, which we must learn