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Pharmaceutical Market Research

Market Opportunity Assessment for
Immune Thrombocytopenic Purpura (ITP)- an Autoimmune Disease
using the Commercial Forecasting Modelling

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Market Opportunity Assessment for Immune Thrombocytopenic Purpura (ITP)- an Autoimmune Disease using the Commercial Forecasting Modelling

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CHAPTER 1

- Introduction
- About the company
- Aim
- Objective
- Research Methodologies

Introduction

- Forecasting refers to the process of estimating a product's revenue and patient numbers. This helps the pharmaceutical companies to develop strategies to maximize their revenue and market share by considering the factors (launch of competitors' product, discount schemes etc.) that may lead to loss in revenue.
- The time horizon of forecast ranges from:

Monthly

- (12-36 months)

Annual

- (1-3 years)

Short-term

- (3-5 years)

Long-term

- (5—15 years)

About the Company

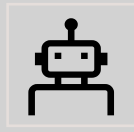
- PharmaACE Analytics Pvt. Ltd. is life sciences focused company. Headquartered in USA, the company provides analytic solutions for efficient commercialization of pharmaceutical products.
- The company works through teams such as **Competitive Intelligence**, **Forecasting** and **IT** to provide pharmaceutical companies with business-critical research and insights that helps them to make informed decisions.
- The company stands out in the field of business consulting because of the differentiators like –



From
conceptualization to
Execution



Simplified value-
driven solutions



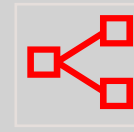
Tailored approach



Client Values



People and culture



Trust and
Relationship

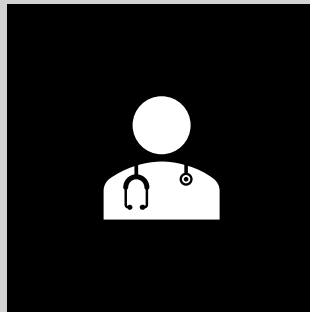
Aim

The aim of this study report is to gather in-depth understanding of an autoimmune disorder known as **ITP (Immune Thrombocytopenic Purpura)** including but not limited to the pathophysiology, treatment algorithms, prevalence & incidence across different markets .

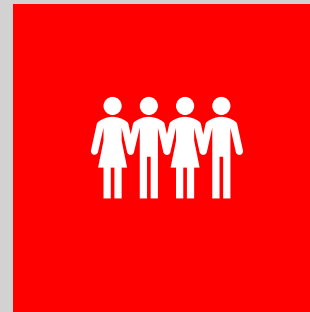
Objectives



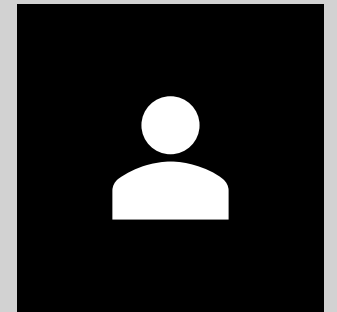
To understand the definition and pathophysiology of the autoimmune disorder-ITP



To understand the developed treatment algorithms of the disease as per the US, European and Japanese guidelines



To record and calculate the epidemiological considerations (incidence and prevalence) of the disease in 7 major markets.



To create a proposed patient based forecast flow for the disease

Research Methodologies



Study Area –
PharmaACE
Analytics Pvt. Ltd.
Pune, Maharashtra
with Immune
Thrombocytopenic
Purpura as the
disease of interest



Study Design –
Analytical study
conducted for the
ITP patients



Study Duration-
3 months from 3
February 2020 to 3
May 2020.



Sample Size –
The entire ITP
patients of 7MM
(US, UK, France,
Italy, Germany,
Spain, and Japan)
were considered
for estimation of
volume and
revenue.



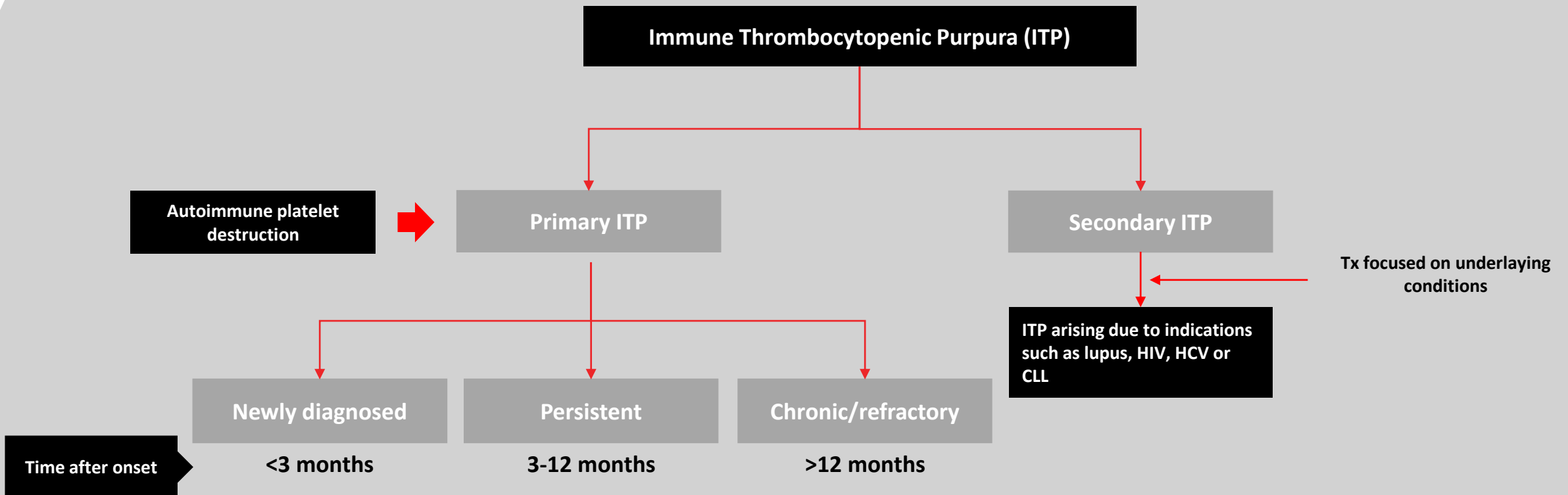
**Data collection
methods-**
Secondary analysis
of the various
studies available
on the disease was
done with available
secondary sourced
literature, PubMed,
Science direct, and
other online
resources.

CHAPTER 2

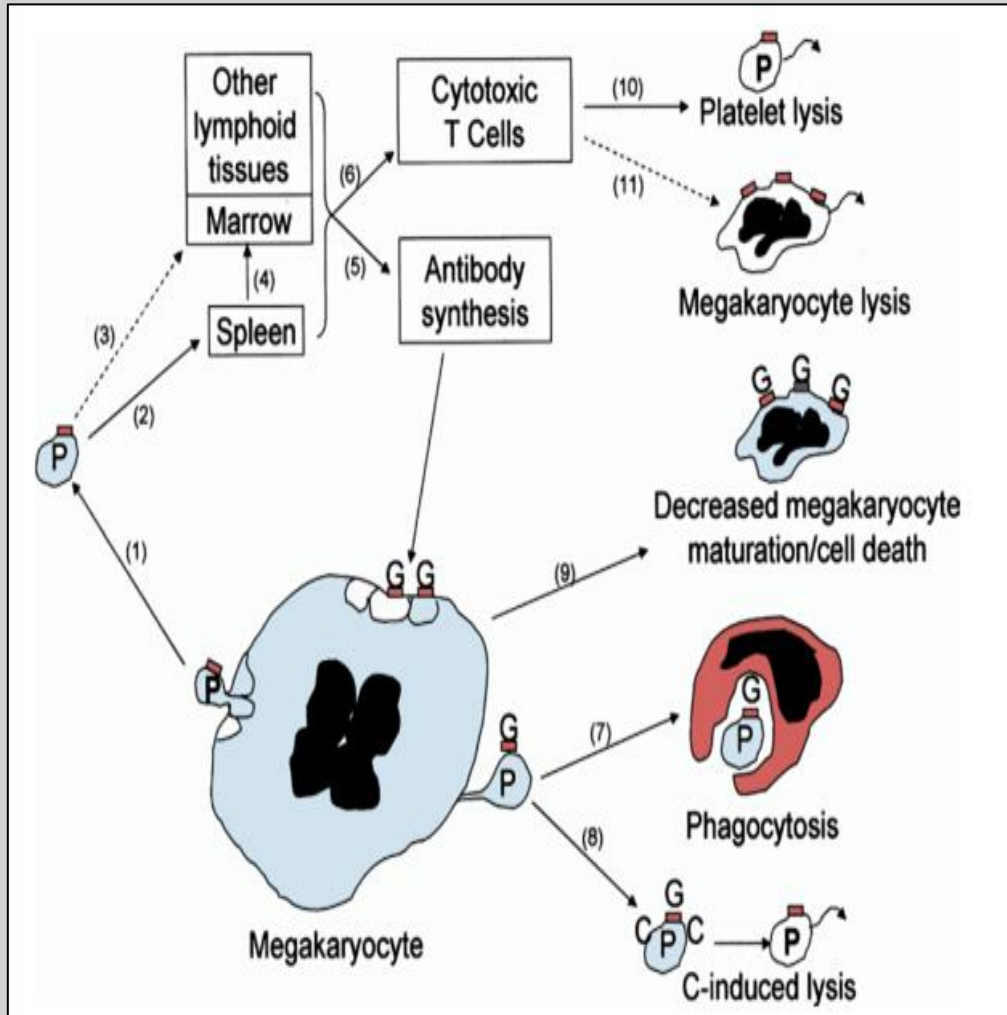
- Understanding the Disorder
- Pathophysiology of ITP

Understanding The Disorder

- Immune Thrombocytopenic Purpura (ITP) is an autoimmune disorder in which the patient's immune system reacts with a platelet autoantigen(s) resulting in thrombocytopenia due to immune-mediated platelet destruction and/or suppression of platelet production.



Pathophysiology of ITP

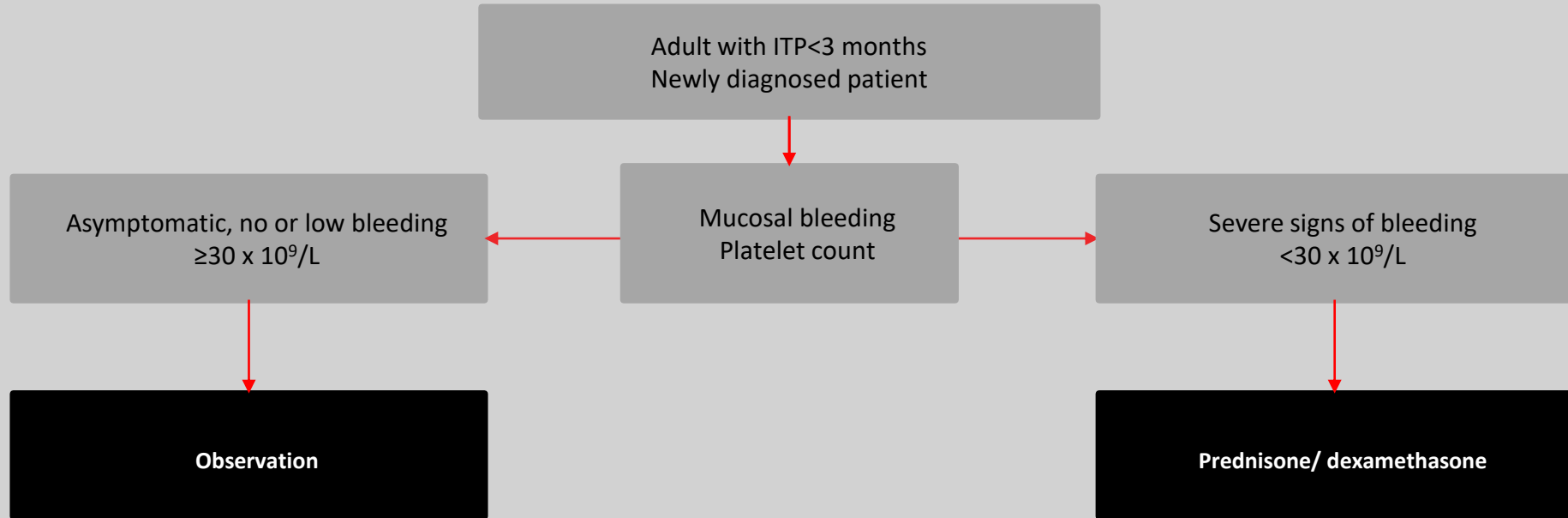


- Platelet membrane proteins become antigenic and stimulate the immune system to produce autoantibodies and cytotoxic T cells
- Antigen-specific memory cells develop, circulate, and initiate a more generalized immune response”
- IgG antiplatelet antibody (G) is produced and cytotoxic T lymphocytes are generated
- Autoantibody binds to platelets, causing their destruction by either phagocytosis or complement (C)-induced lysis and to megakaryocytes resulting in decreased maturation and cell death
- Cytotoxic T lymphocytes result in platelet lysis and, possibly, megakaryocyte lysis
- Solid lines show reactions with solid experimental evidence and dashed lines show reactions that are postulated

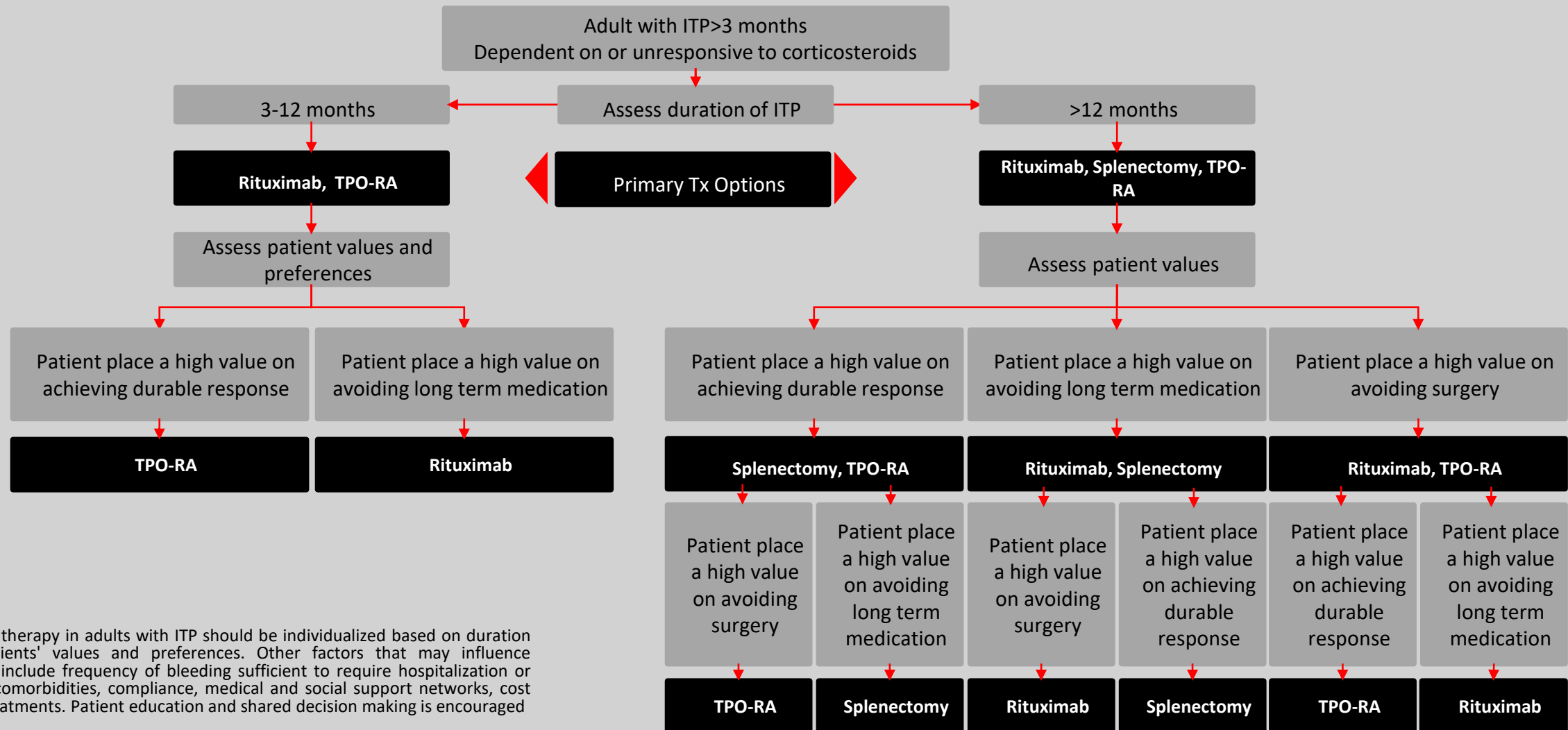
CHAPTER 3

- Treatment Algorithm : US
- Treatment Algorithm : Europe
- Treatment Algorithm : Japan

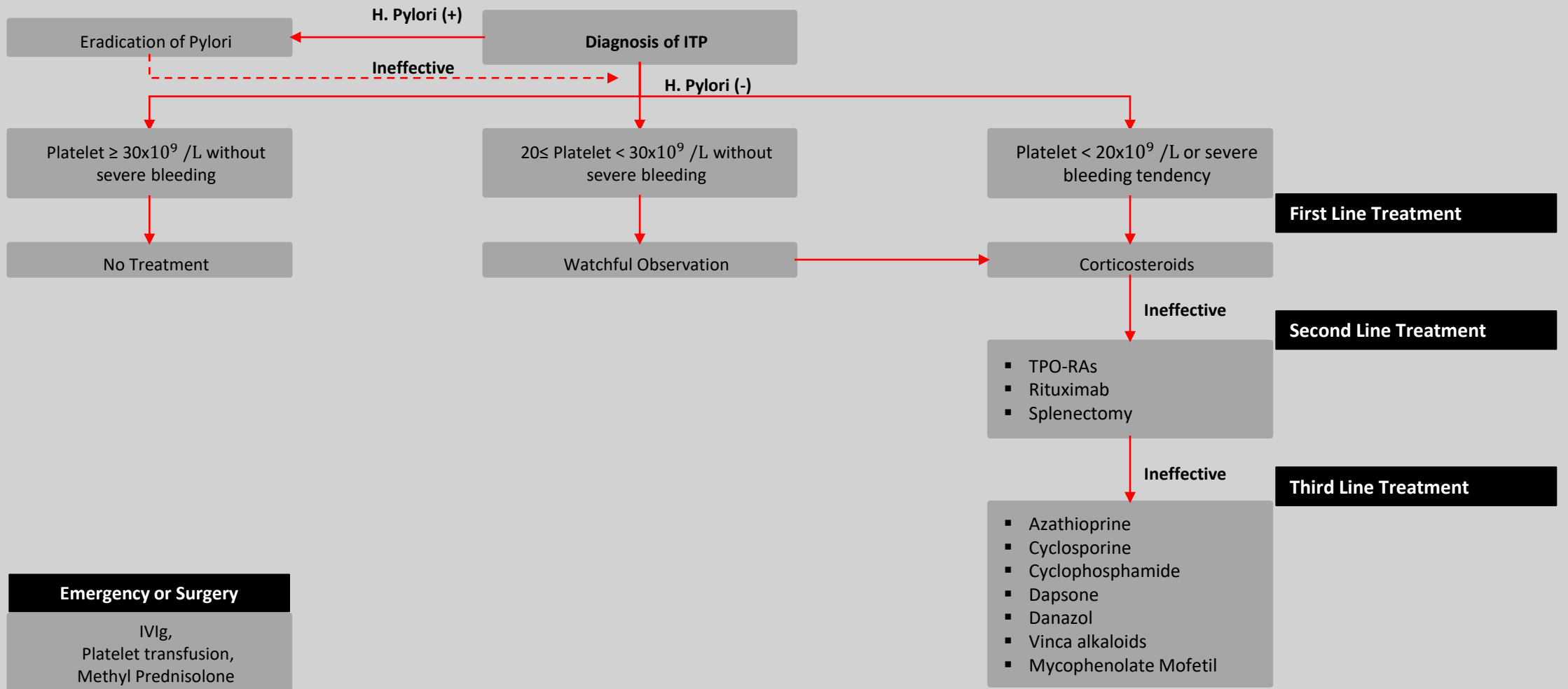
Clinical Practice Guidelines for ITP: US



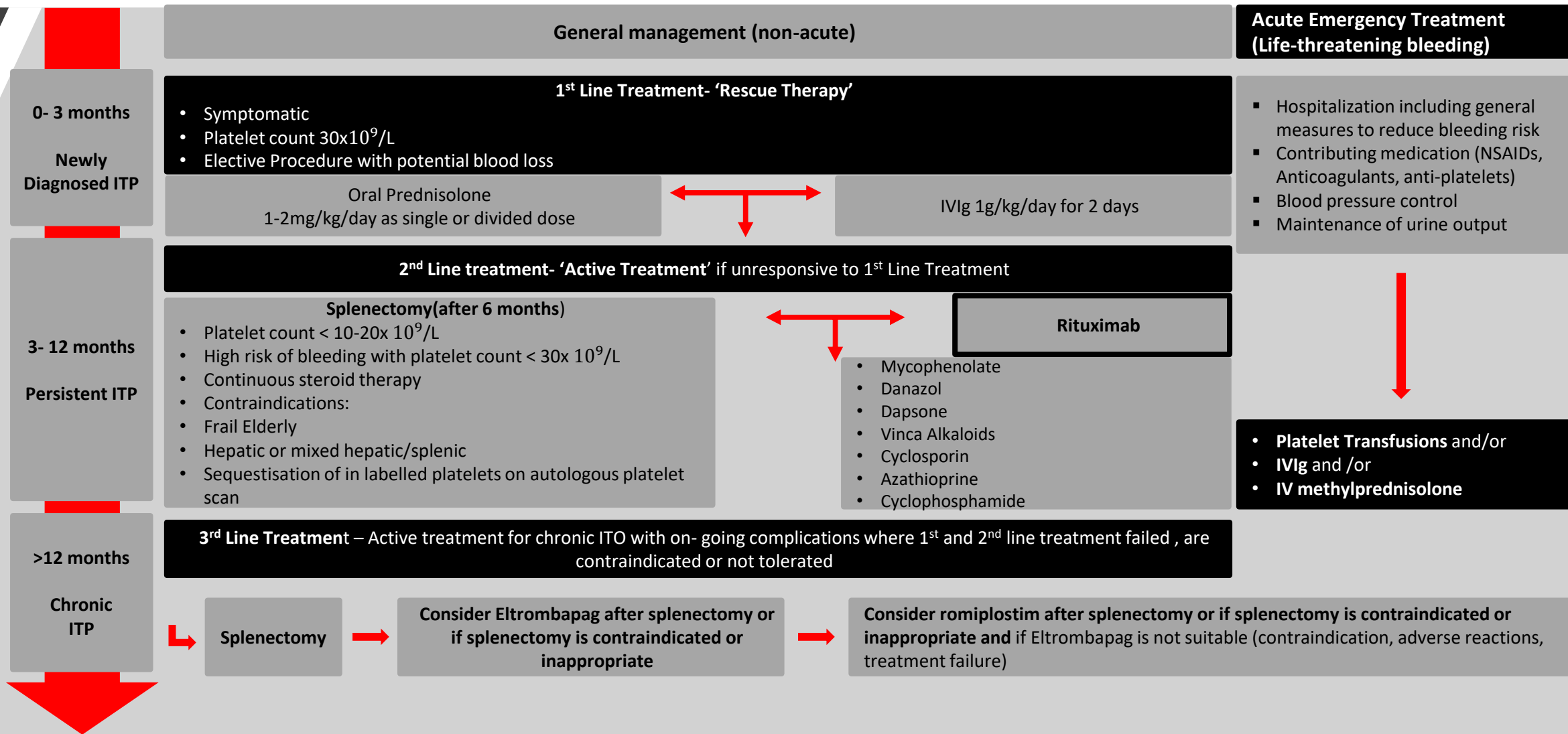
Clinical Practice Guidelines for ITP: US



Clinical Practice Guidelines for ITP: JAPAN



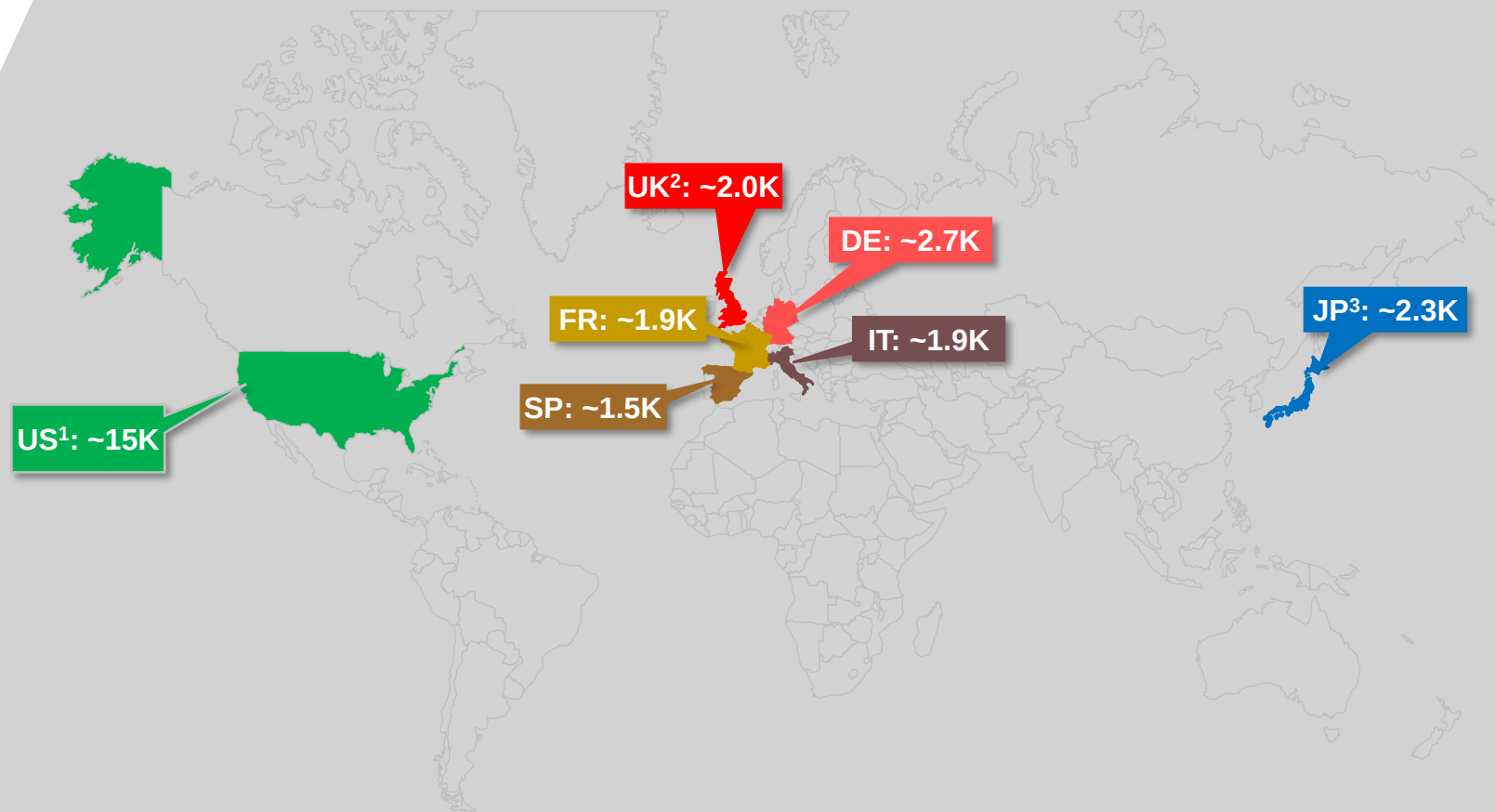
Clinical Practice Guidelines for ITP: EUROPE



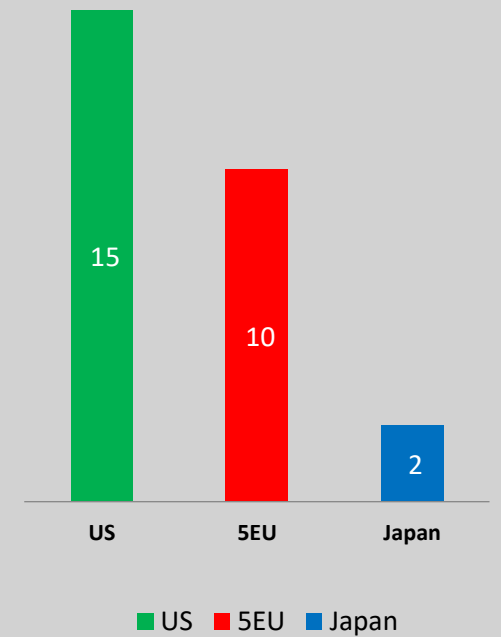
CHAPTER 4

- Epidemiology :ITP Incidence
- Epidemiology :ITP Prevalence

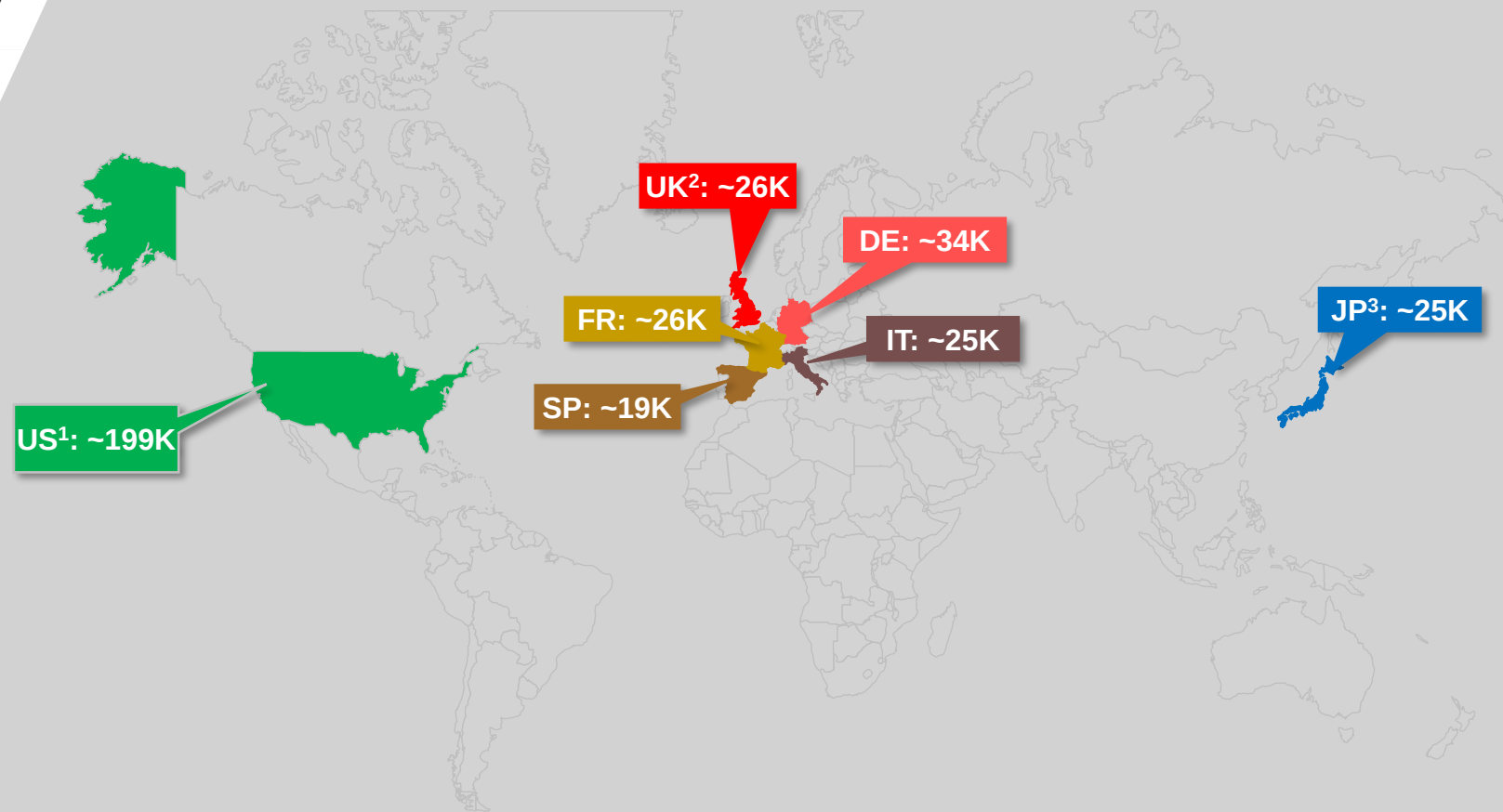
ITP INCIDENCE



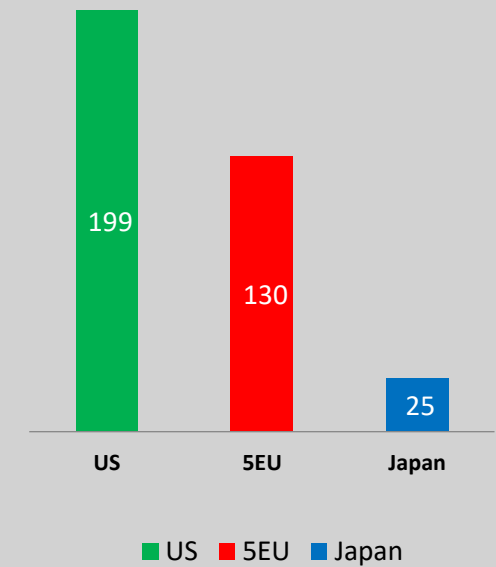
Incidence: By Region
Total Patients ('000)



ITP PREVALENCE



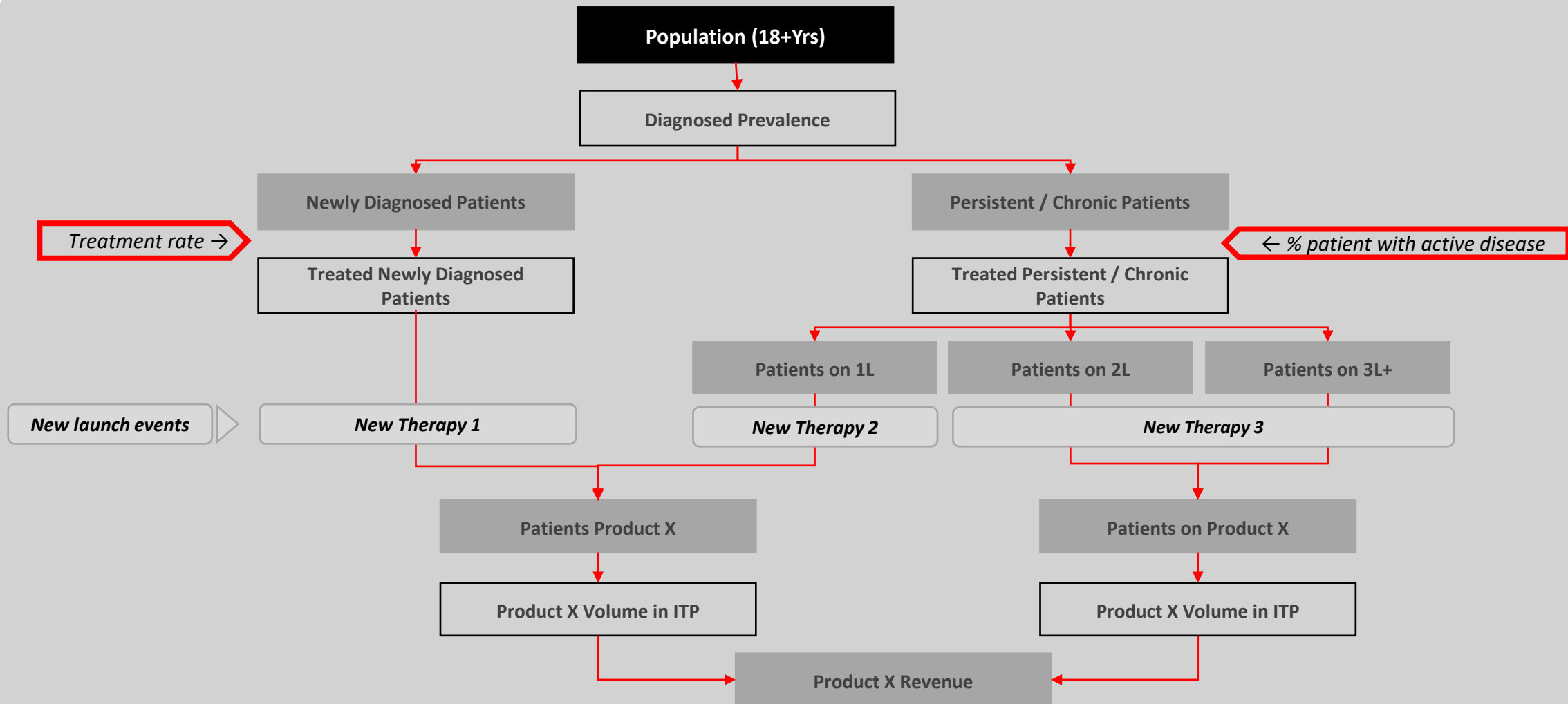
Prevalence: By Region
Total Patients ('000)



CHAPTER 5

➤ Forecast Flow

Forecast Flow



CHAPTER 6

- Results
- Conclusion

Results and Conclusion



The study report discusses about the disease definition and Pathophysiology in detail.

It can be noticed that there may not be a specific cause of the disease, the disease itself is an autoimmune disorder causing lack of platelets in the body.



The treatment guidelines vary from region to region, but no significant changes can be observed in the studied three treatment guidelines.



Data points for prevalence and incidence were ordered for each of the regions and the estimated patient numbers were so calculated by multiplying with the total population.



The data & assumptions acquired from secondary research were used to develop an excel based forecast model for ITP.

The model was split by different lines of therapies to incorporate the patient dynamics across various therapies.

Various market dynamics and assumptions were also taken into consideration for deciding the forecast revenue from the model.

CHAPTER 7 (Appendix)

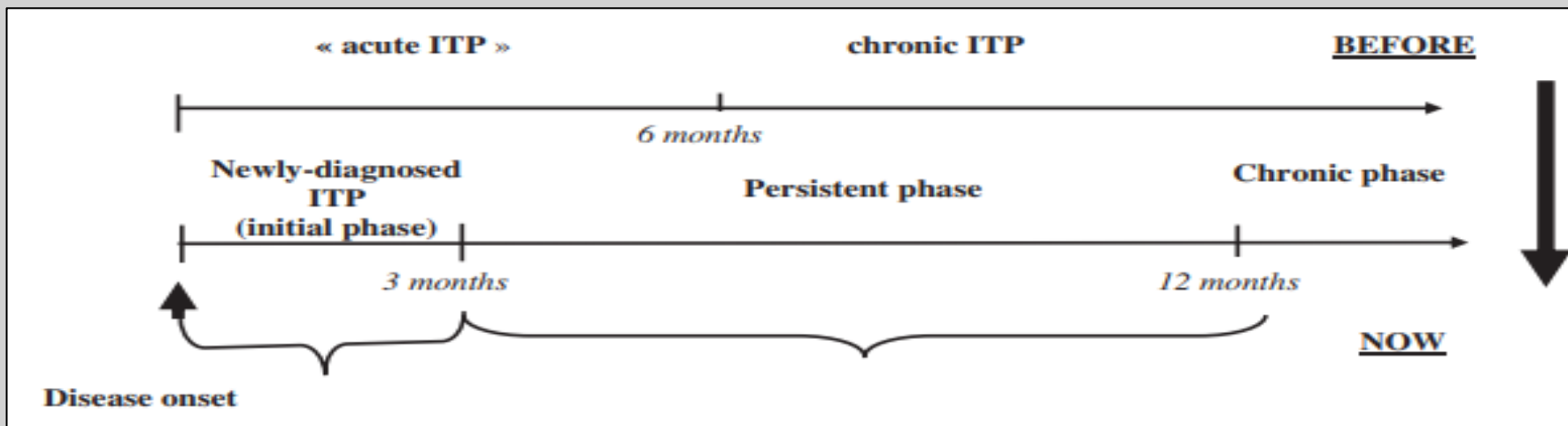
- Disease Classification
- ITP Incidence
- ITP Prevalence

Diagnosis and Classification

The principal diagnosis of ITP is based on the physical examination, history, CBC, and the peripheral smear examination. The diagnosis such made should eliminate the other causes of thrombocytopenia.

Classification of the Disease

1. **Newly Diagnosed ITP** – up to three months, from the time of diagnosis
2. **Persistent ITP**- disease duration ranges between 3 and 12 months from diagnosis
3. **Chronic ITP**- classified for a disease duration of more than 12 months



ITP Prevalence

Region	US ¹	UK ²	Japan ³
Title	Analysis of the impact and burden of illness of adult chronic ITP in the US.	Prevalence of Diagnosed Adult Immune Thrombocytopenia in the United Kingdom.	Reference guide for management of adult immune thrombocytopenia in Japan: 2019 Revision
Study period (Publication)	2000 to 2004 (2009)	1992 to 2009 (2011)	2019
Sample Size/ Methodology	Retrospective claims data	General practice research database	Estimation based on disease medical care certificates issued
Data Points	80 per 100,000	50 per 100,000	25000 patients
Estimated Prevalence (2020)	~199K	~26K	~25K
Authors	Saleh MN et.al.	Bennett, D. et.al.	H. Kashiwagi et al.

ITP Incidence

Region	US ¹	UK ²	Japan ³
Title	Primary immune thrombocytopenia in us clinical practice: incidence and healthcare burden in first 12 months following diagnosis.	The incidence of idiopathic thrombocytopenic purpura among adults: a population-based study and literature review.	Epidemiology of primary immune thrombocytopenia in children and adults in Japan: a population-based study and literature review.
Study period (Publication)	2010 to 2016 (2020)	1992 to 2005 (2009)	2004 to 2007 (2011)
Sample Size/ Methodology	Longitudinal patients claims data analysis	General practice research databased	DHMC database of the MHLW, Japan
Data Points	6.0 per 100,000	3.9 per 100,000	2.2 per 100,000
Estimated Incidence (2020)	~15K	~2K	~2.3K
Authors	Weycker, D et.al.	Abrahamson PE et.al.	Y Kurata et.al.