SNS COLLEGE OF PHARMACY AND HEALTH SCIENCES

Affiliated To The Tamil Nadu Dr. MGR Medical University, Chennai
Approved by Pharmacy Council of India, New Delhi.
Coimbatore -641035

COURSE NAME : PHARMACOVIGILANCE (BP805ET)

VIII SEM / IV YEAR

TOPIC 1 : EDUCATION AND TRAINING PROGRAM

Empathize

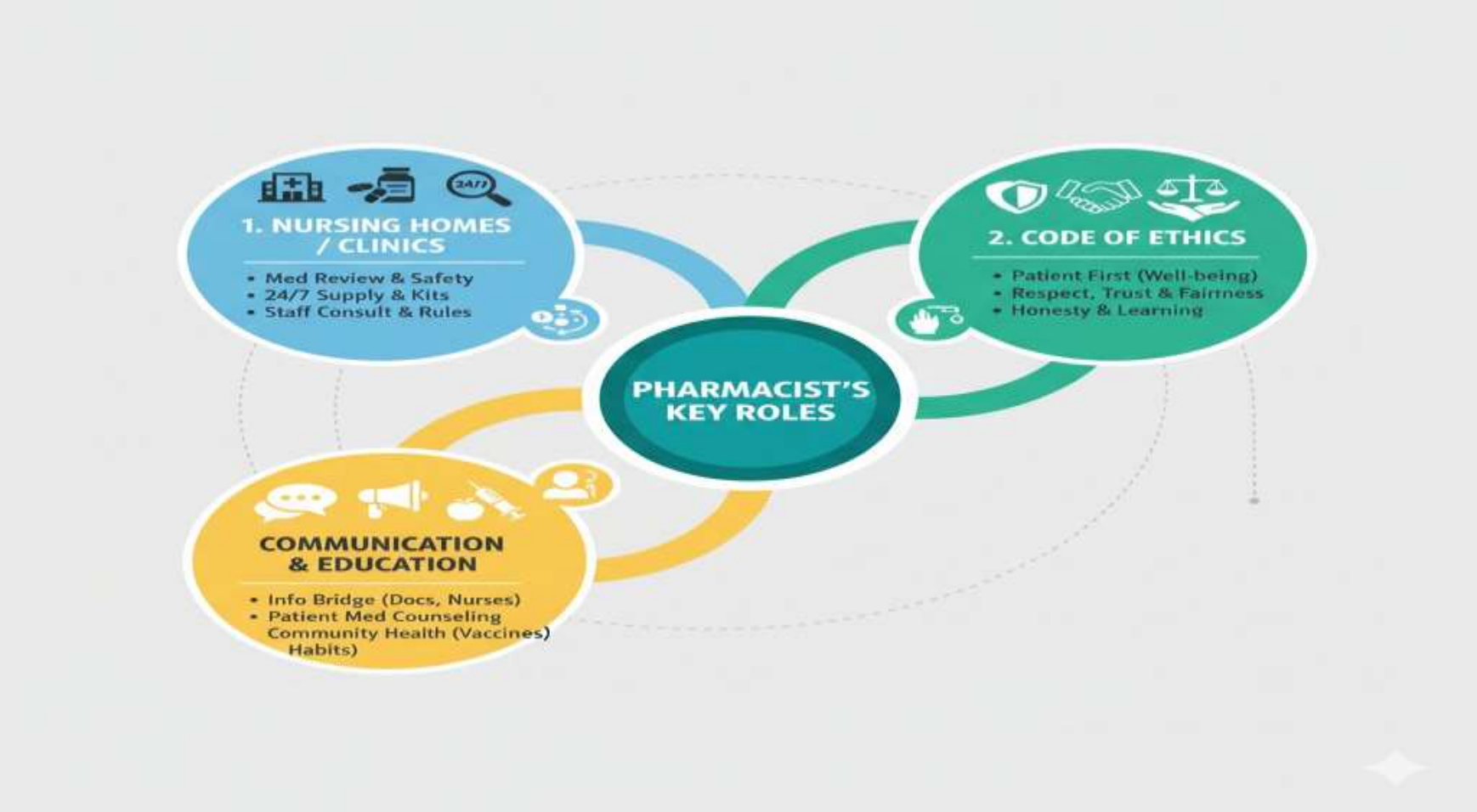
Services to nursing homes/clinics

Understand the needs of nurses, doctors, and patients

Observe how medicines are stored, dispensed, and used

Identify problems like delays or wrong medication handling

MINDMAP


1. NURSING HOMES / CLINICS
• Med Review & Safety
• 24/7 Supply & Kits
• Staff Consult & Rules
2. CODE OF ETHICS
• Patient First (Well-being)
• Respect, Trust & Fairness
• Honesty & Learning
PHARMACIST'S KEY ROLES
COMMUNICATION & EDUCATION
• Info Bridge (Docs, Nurses)
• Patient Med Counseling
Community Health (Vaccines)
Habits)

Empathize

INTRODUCTION

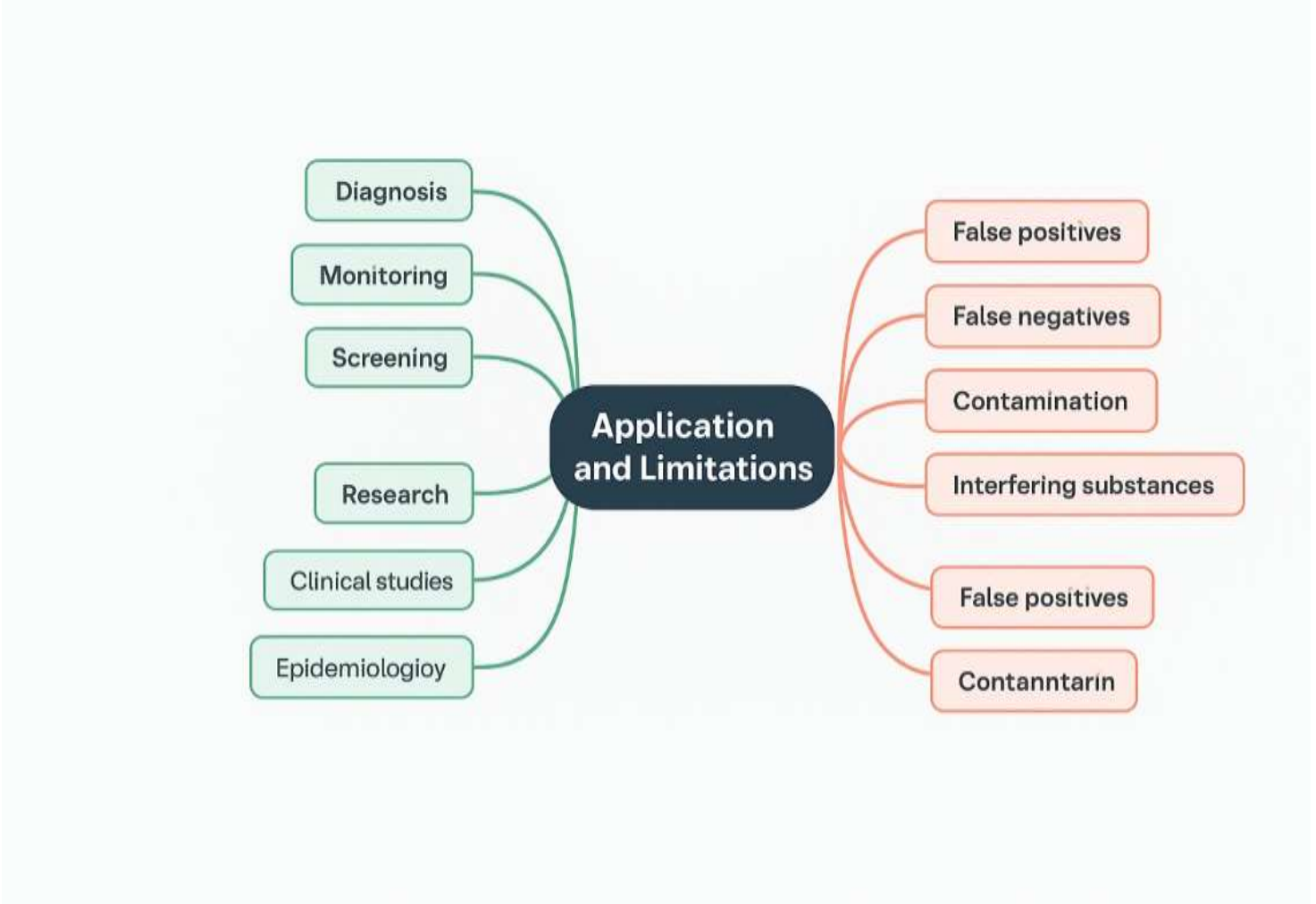
Empathize: Understanding People Behind the Process

- Observe, listen, and engage with patients, staff, and community
- Identify pain points and unmet needs in pharmacy services

Examples

- **Services to Nursing Homes/Clinics:** Staff struggle with medication logistics and safety
- **Code of Ethics:** Ethical dilemmas arise around patient safety and controlled drugs
- **Communication/Education:** Patients lack clarity about proper medicine use

Empathize


Application and Limitations
Diagnosis
Monitoring
Screening
Research
Clinical studies
Epidemiologioy
False positives
False negatives
Contamination
Interfering substances
False positives
Contanntarin

Empathize

AdhereRx
Multi-Dose System

Confidenttial
Ethics
Hotline
Patient Decision-Making

HealthLiteracy Infographics

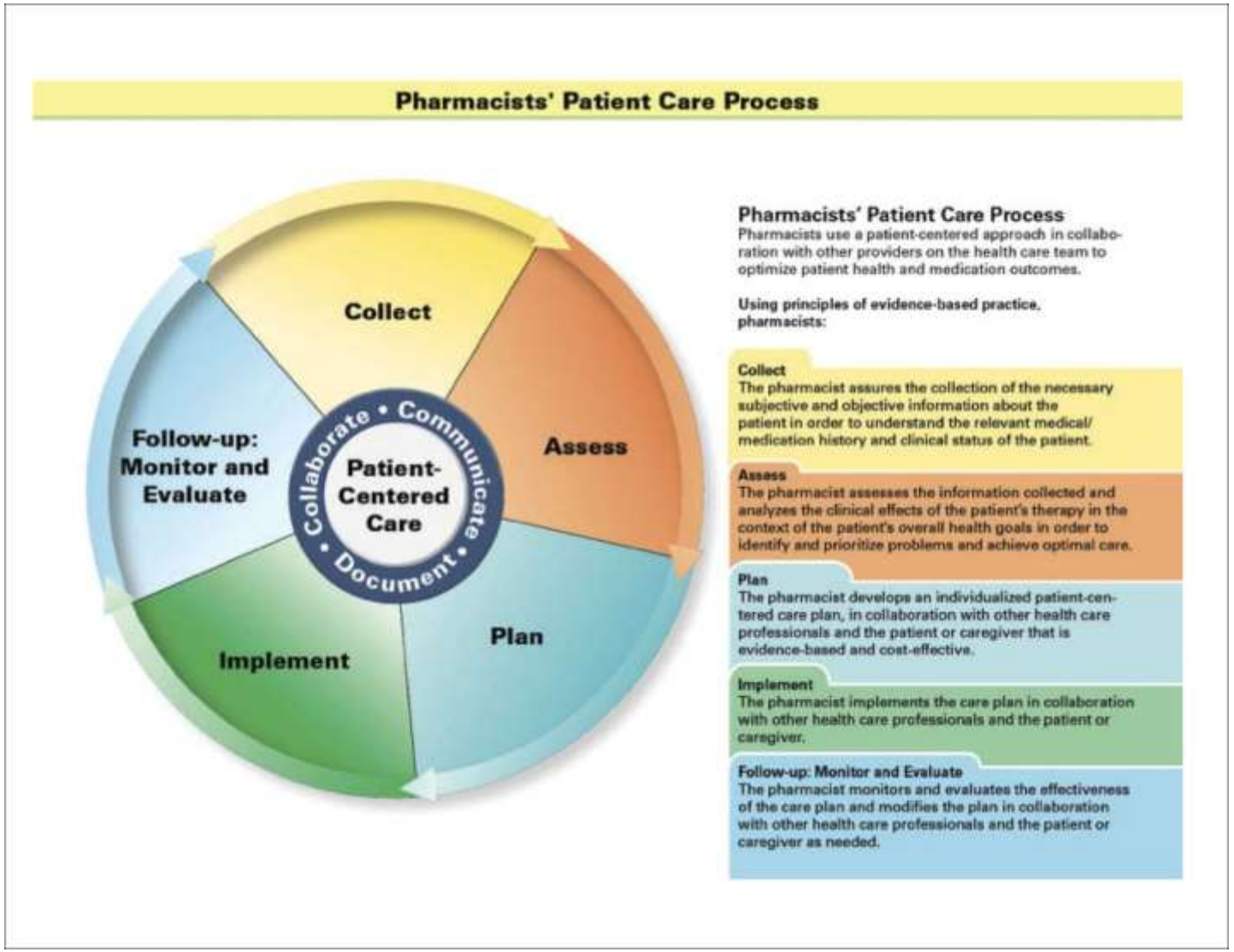
CareBridge
e-Referral

Ask a Pharoramist
Tuesdays 7 PM EST

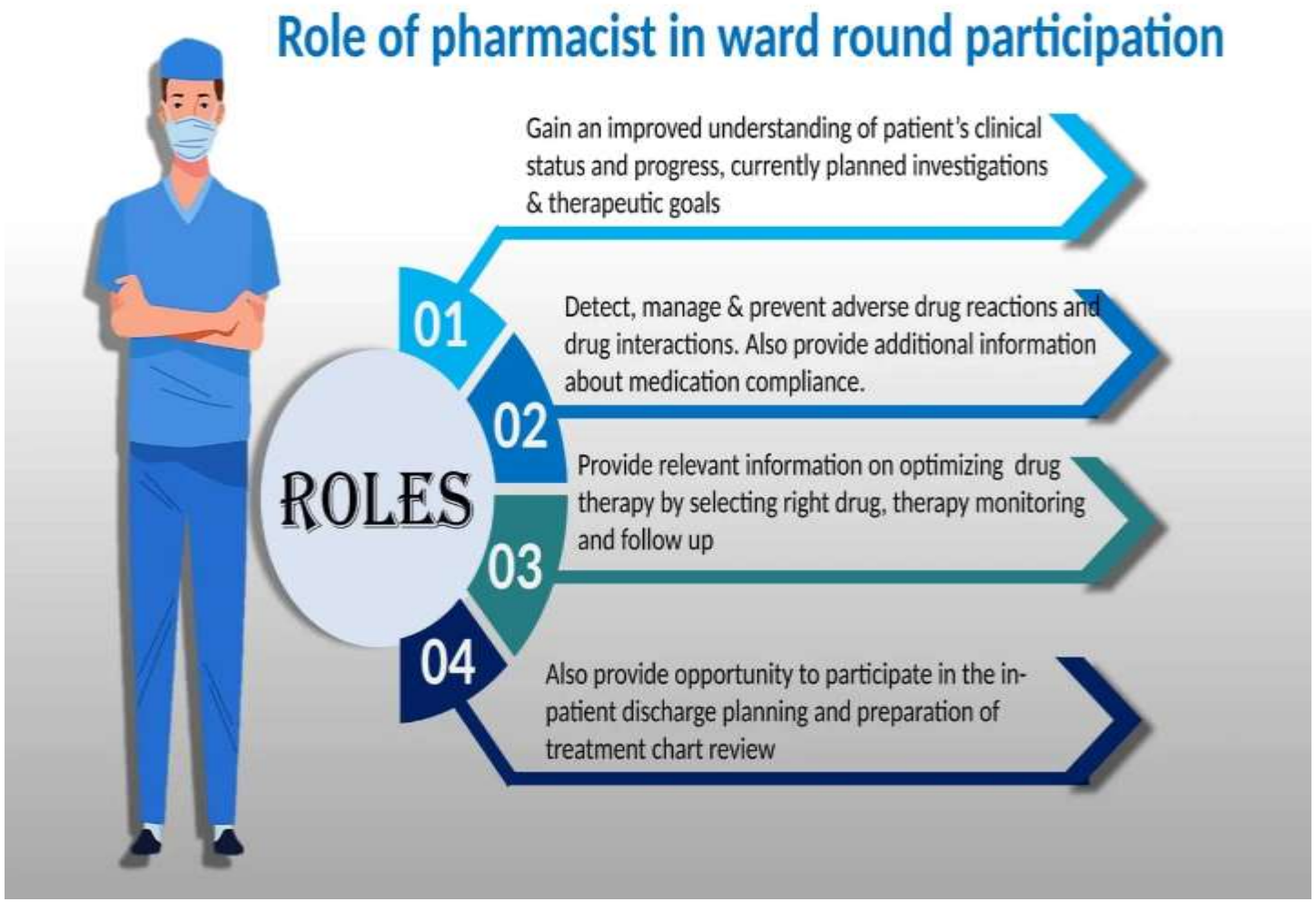
Empathize

Medicines information
Quality assurance
Technical services
Medicines acquisition/ purchasing
Medicines management
Information technology
Research & development
Education & training
Medicines supply & dispensary
Clinical

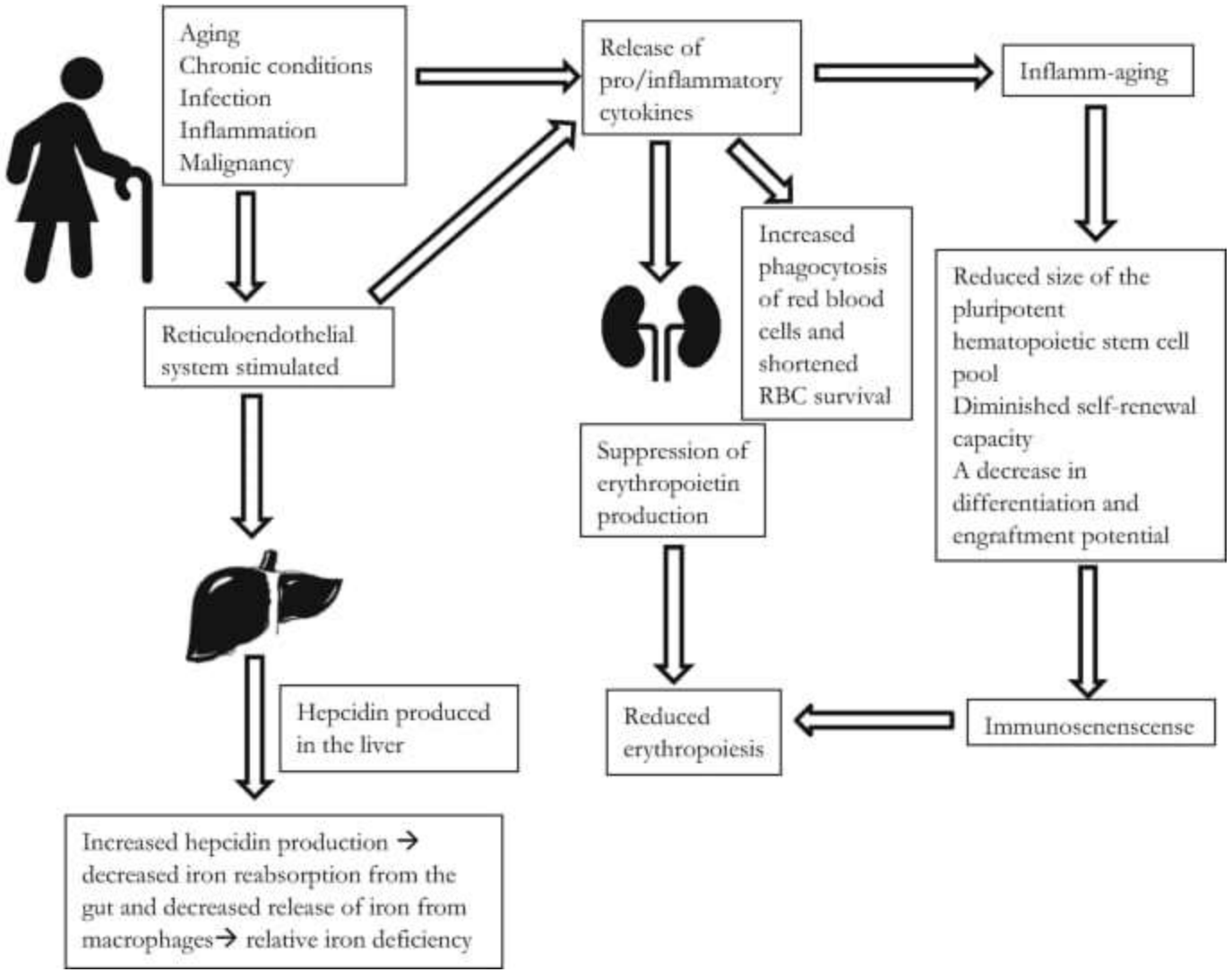
Define

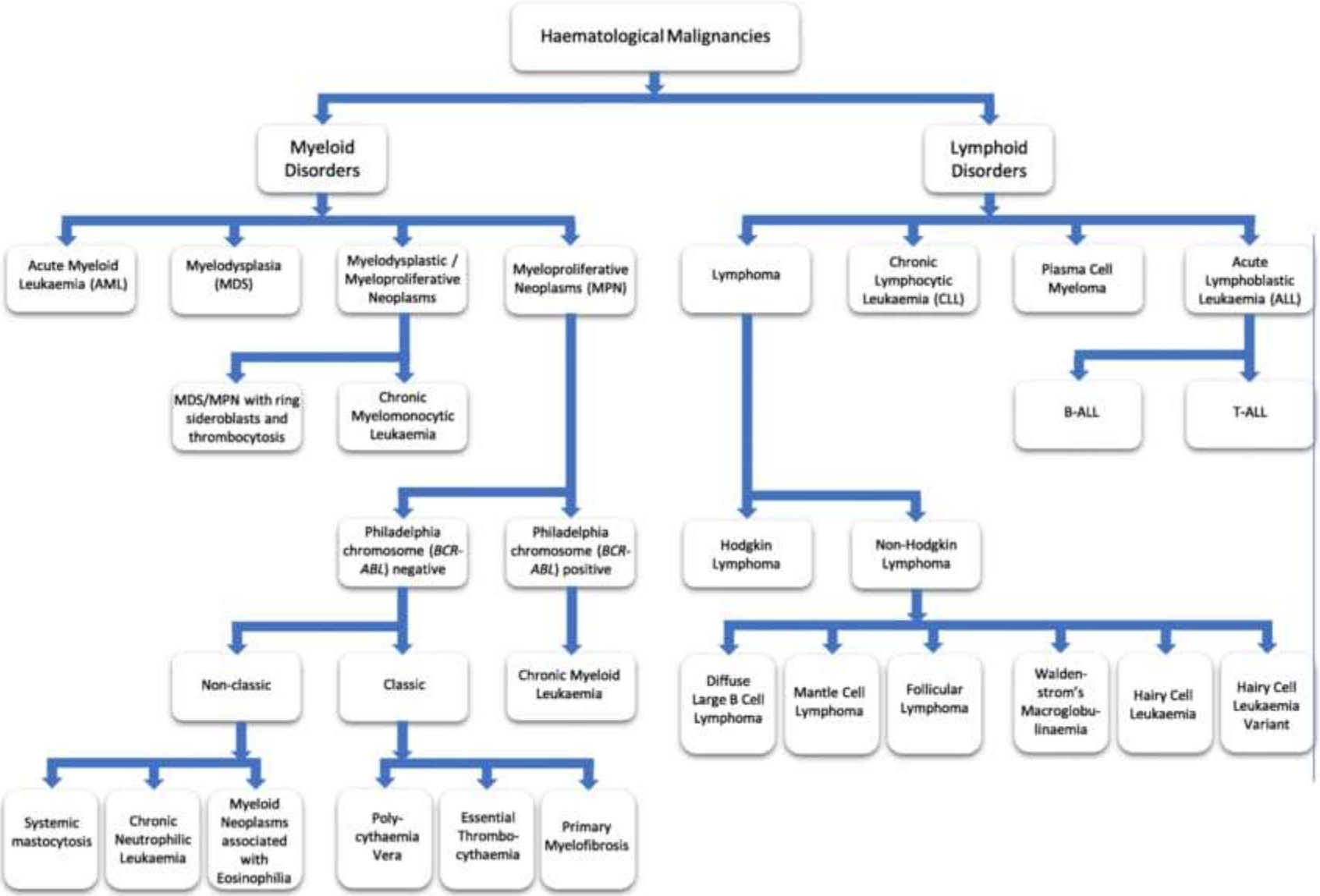

Pharmacists' Patient Care Process
Collect
Assess
Plan
Implement
Follow-up: Monitor and Evaluate
Collaborate • Communicate • Document •
Patient-Centered Care
Pharmacists' Patient Care Process
Pharmacists use a patient-centered approach in collaboration with other providers on the health care team to optimize patient health and medication outcomes.
Using principles of evidence-based practice, pharmacists:
Collect
The pharmacist assures the collection of the necessary subjective and objective information about the patient in order to understand the relevant medical/medication history and clinical status of the patient.
Assess
The pharmacist assesses the information collected and analyzes the clinical effects of the patient's therapy in the context of the patient's overall health goals in order to identify and prioritize problems and achieve optimal care.
Plan
The pharmacist develops an individualized patient-centered care plan, in collaboration with other health care professionals and the patient or caregiver that is evidence-based and cost-effective.
Implement
The pharmacist implements the care plan in collaboration with other health care professionals and the patient or caregiver.
Follow-up: Monitor and Evaluate
The pharmacist monitors and evaluates the effectiveness of the care plan and modifies the plan in collaboration with other health care professionals and the patient or caregiver as needed.

Define

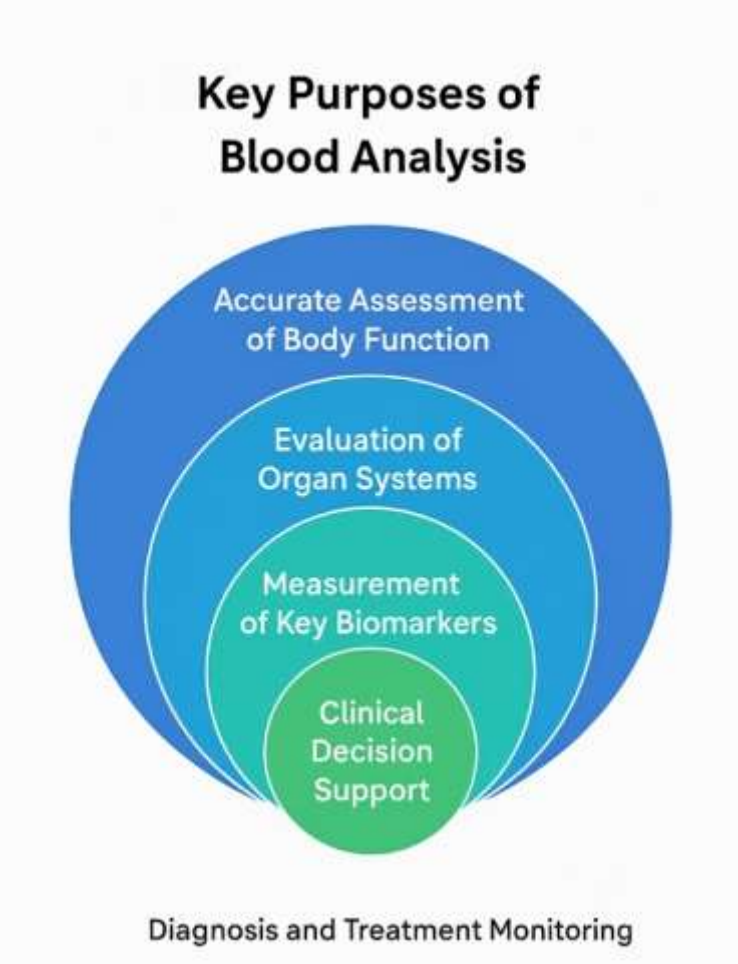

Role of pharmacist in ward round participation
ROLES
01
Gain an improved understanding of patient's clinical status and progress, currently planned investigations & therapeutic goals
02
Detect, manage & prevent adverse drug reactions and drug interactions. Also provide additional information about medication compliance.
03
Provide relevant information on optimizing drug therapy by selecting right drug, therapy monitoring and follow up
04
Also provide opportunity to participate in the in-patient discharge planning and preparation of treatment chart review

Ideate

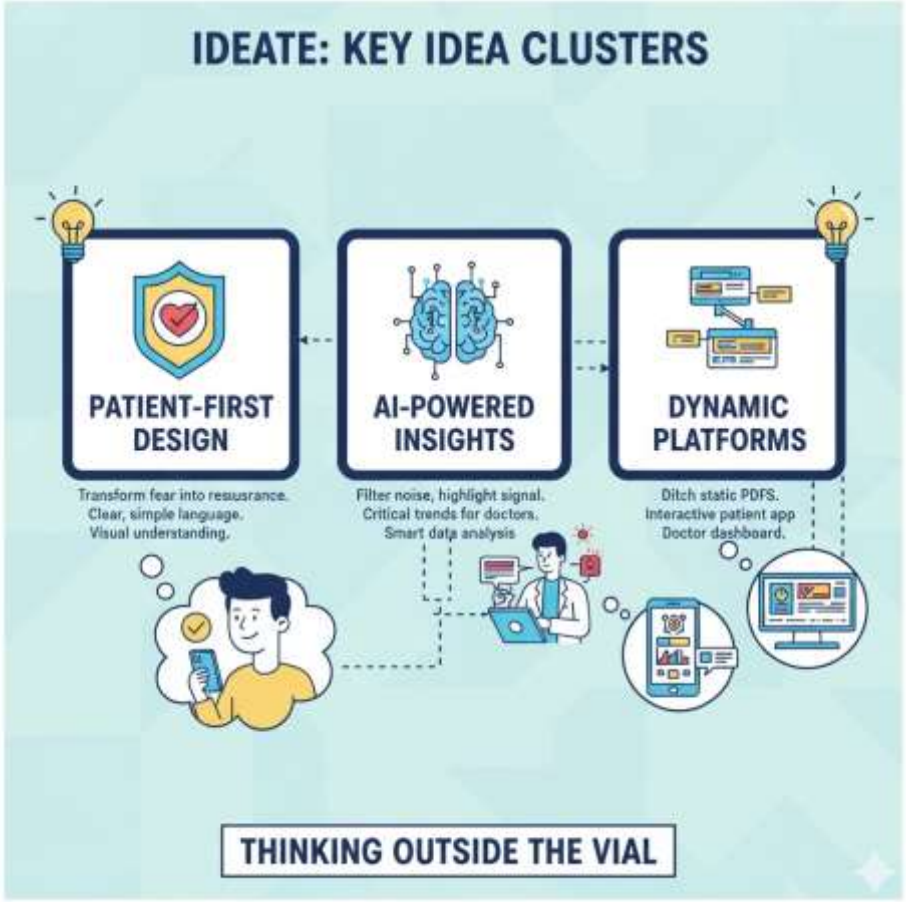

Aging
Chronic conditions
Infection
Inflammation
Malignancy
Release of pro/inflammatory cytokines
Inflamm-aging
Reticuloendothelial system stimulated
Increased phagocytosis of red blood cells and shortened RBC survival
Reduced size of the pluripotent hematopoietic stem cell pool
Diminished self-renewal capacity
A decrease in differentiation and engraftment potential
Suppression of erythropoietin production
Hepcidin produced in the liver
Reduced erythropoiesis
Immunosenenscense
Increased hepcidin production → decreased iron reabsorption from the gut and decreased release of iron from macrophages→ relative iron deficiency


Haematological Malignancies
Myeloid Disorders
Lymphoid Disorders
Acute Myeloid Leukaemia (AML)
Myelodysplasia (MDS)
Myelodysplastic / Myeloproliferative Neoplasms
Myeloproliferative Neoplasms (MPN)
Lymphoma
Chronic Lymphocytic Leukaemia (CLL)
Plasma Cell Myeloma
Acute Lymphoblastic Leukaemia (ALL)
MDS/MPN with ring sideroblasts and thrombocytosis
Chronic Myelomonocytic Leukaemia
B-ALL
T-ALL
Philadelphia chromosome (BCR-ABL) negative
Philadelphia chromosome (BCR-ABL) positive
Hodgkin Lymphoma
Non-Hodgkin Lymphoma
Non-classic
Classic
Chronic Myeloid Leukaemia
Diffuse Large B Cell Lymphoma
Mantle Cell Lymphoma
Follicular Lymphoma
Walden-strom's Macroglobu-linaemia
Hairy Cell Leukaemia
Hairy Cell Leukaemia Variant
Systemic mastocytosis
Chronic Neutrophilic Leukaemia
Myeloid Neoplasms associated with Eosinophilia
Poly-cythaemia Vera
Essential Thrombo-cythaemia
Primary Myelofibrosis

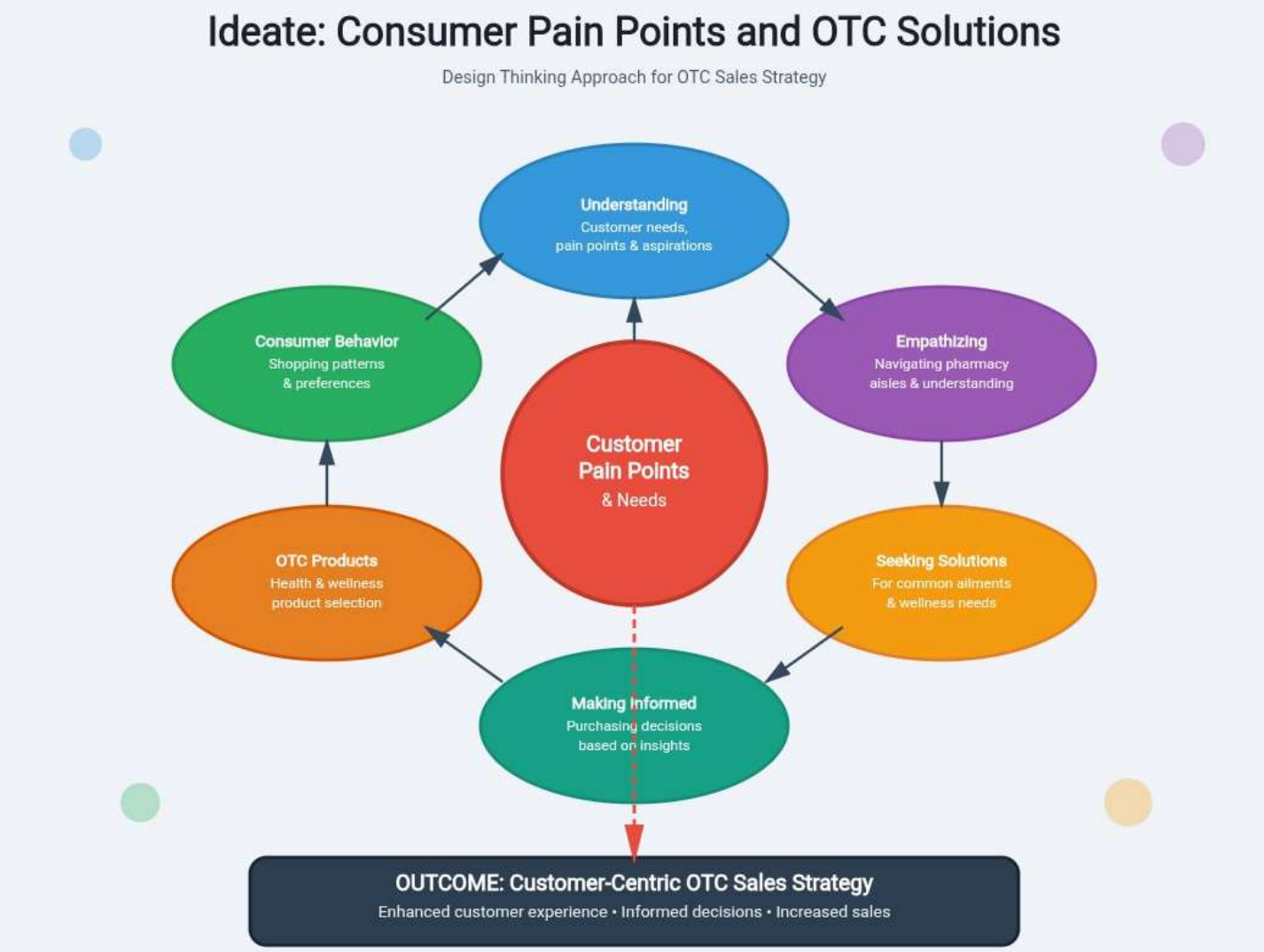
Prototype


Key Purposes of Blood Analysis
Accurate Assessment of Body Function
Evaluation of Organ Systems
Measurement of Key Biomarkers
Clinical Decision Support
Diagnosis and Treatment Monitoring

NORMAL? DOES THIS MEAN???
DAY 3... WAITING!
DAY 3... STILL WAITING!
ALL GOOD!


IDEATE: KEY IDEA CLUSTERS
PATIENT-FIRST DESIGN
Transform fear into reassurance.
Clear, simple language.
Visual understanding.
AI-POWERED INSIGHTS
Filter noise, highlight signal.
Critical trends for doctors.
Smart data analysis
DYNAMIC PLATFORMS
Ditch static PDFS.
Interactive patient app
Doctor dashboard.
THINKING OUTSIDE THE VIAL

SUMMARY


Ideate: Consumer Pain Points and OTC Solutions
Design Thinking Approach for OTC Sales Strategy
Understanding
Customer needs, pain points & aspirations
Consumer Behavior
Shopping patterns & preferences
Empathizing
Navigating pharmacy aisles & understanding
Customer Pain Points & Needs
OTC Products
Health & wellness product selection
Seeking Solutions
For common ailments & wellness needs
Making Informed
Purchasing decisions based on insights
OUTCOME: Customer-Centric OTC Sales Strategy
Enhanced customer experience • Informed decisions • Increased sales

CLASS ASSESMENTS

1. **A patient with the HLA-B*57:01 allele is prescribed abacavir. What is the most appropriate action to prevent a severe adverse drug reaction?**

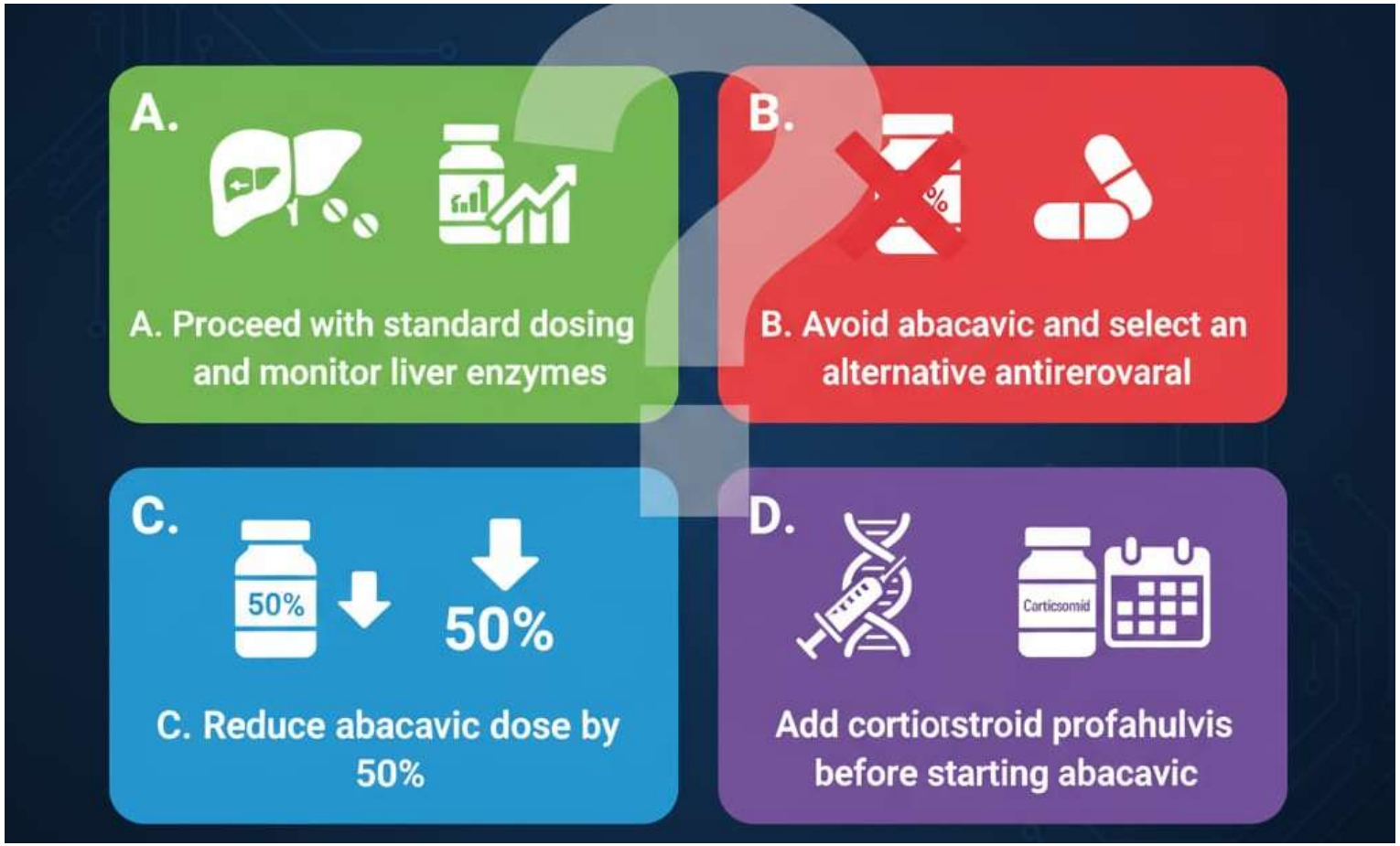
a. Proceed with standard dosing and monitor liver enzymes

b. Avoid abacavir and select an alternative antiretroviral

c. Reduce abacavir dose by 50%

d. Add corticosteroid prophylaxis before starting abacavir

CLASS ASSESSMENTS



CLASS ASSESSMENTS

Which genotype is most associated with life-threatening skin reactions (e.g., Stevens–Johnson syndrome) when exposed to carbamazepine in certain Asian populations?

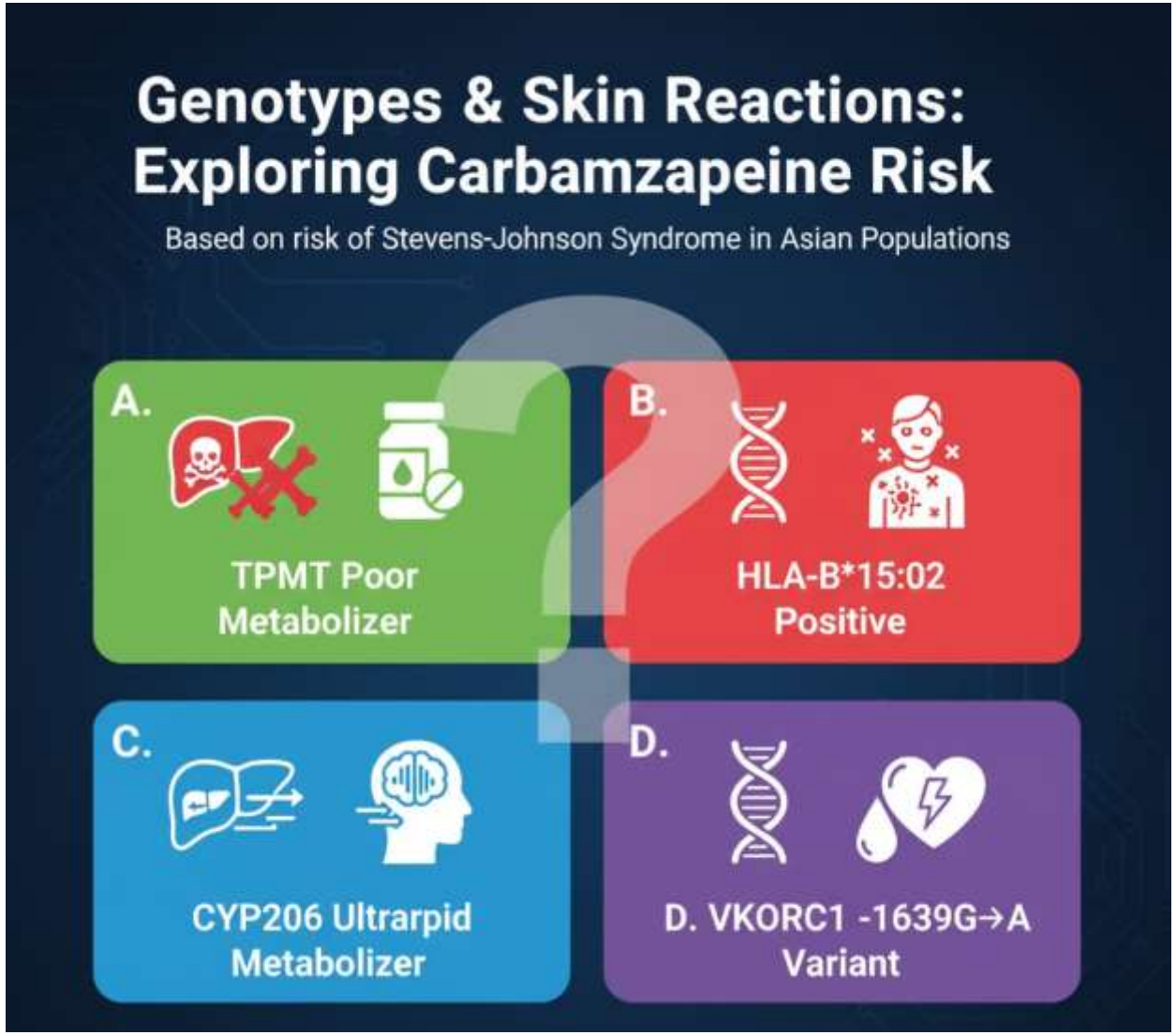
a. TPMT poor metabolizer

b. HLA-B*15:02 positive

c. CYP2D6 ultrarapid metabolizer

d. VKORC1 -1639G→A variant

CLASS ASSESSMENTS



CLASS ASSESSMENTS

A patient with reduced TPMT and NUDT15 activity is starting thiopurine therapy (e.g., mercaptopurine). What adverse reaction risk is increased and how should therapy be adjusted?

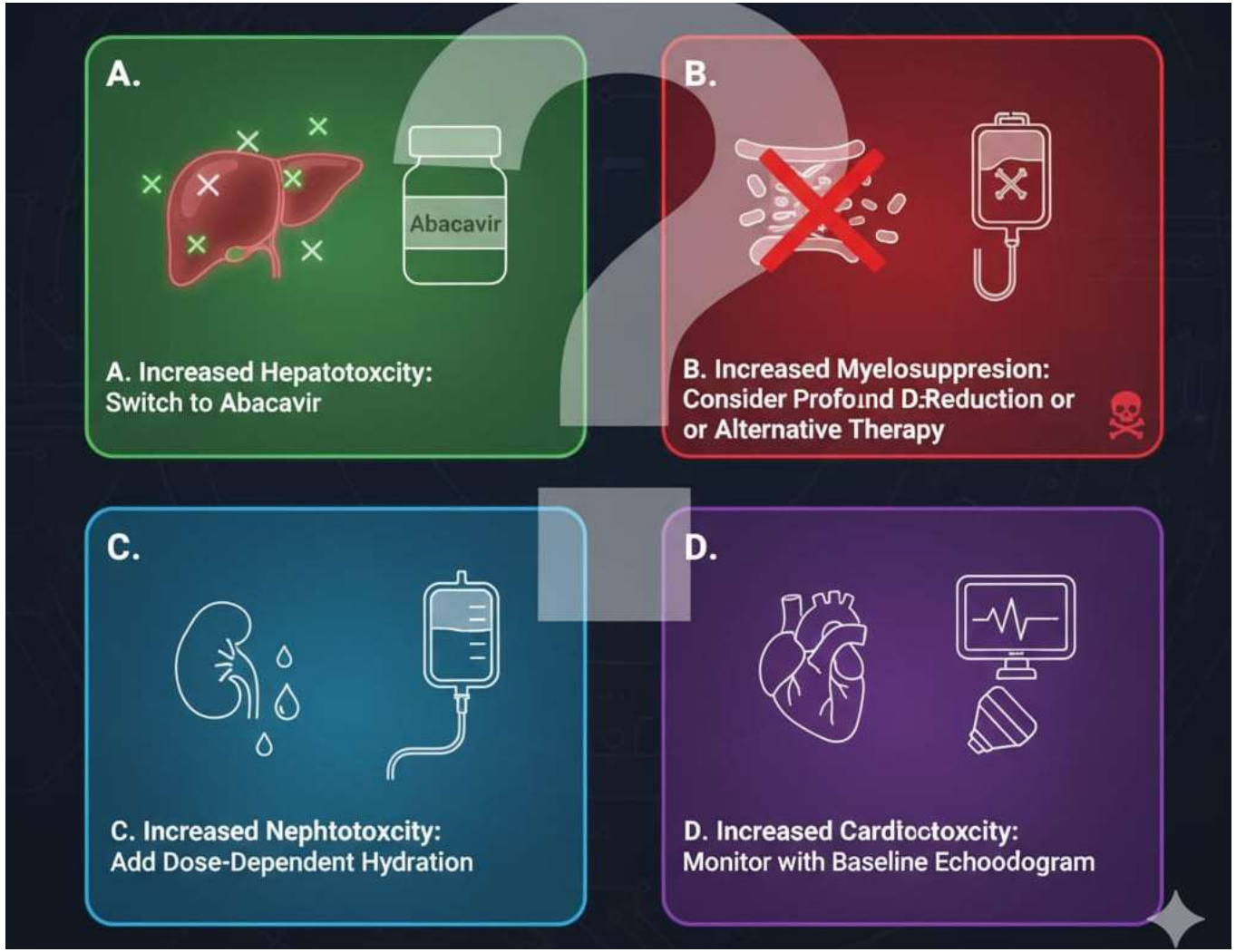
a. Increased hepatotoxicity; switch to abacavir

b. Increased myelosuppression; consider profound dose reduction or alternative therapy

c. Increased nephrotoxicity; add dose-dependent hydration

d. Increased cardiotoxicity; monitor with baseline echocardiogram

CLASS ASSESSMENTS



REFERENCES

1. Merchant S.H. and Dr. J.S.Quadry. A textbook of hospital pharmacy, 4th ed. Ahmadabad: B.S. Shah Prakakshan; 2001.
2. Parthasarathi G, Karin Nyfort-Hansen, Milap C Nahata. A textbook of Clinical Pharmacy Practice-essential concepts and skills, 1st ed. Chennai: Orient Longman Private Limited; 2004.
3. William E. Hassan. Hospital pharmacy, 5th ed. Philadelphia: Lea & Febiger; 1986.
4. Tipnis Bajaj. Hospital Pharmacy, 1st ed. Maharashtra: Career Publications; 2008.
5. Scott LT. Basic skills in interpreting laboratory data, 4th. American Society of Health System Pharmacists Inc; 2009.

Thank
you!