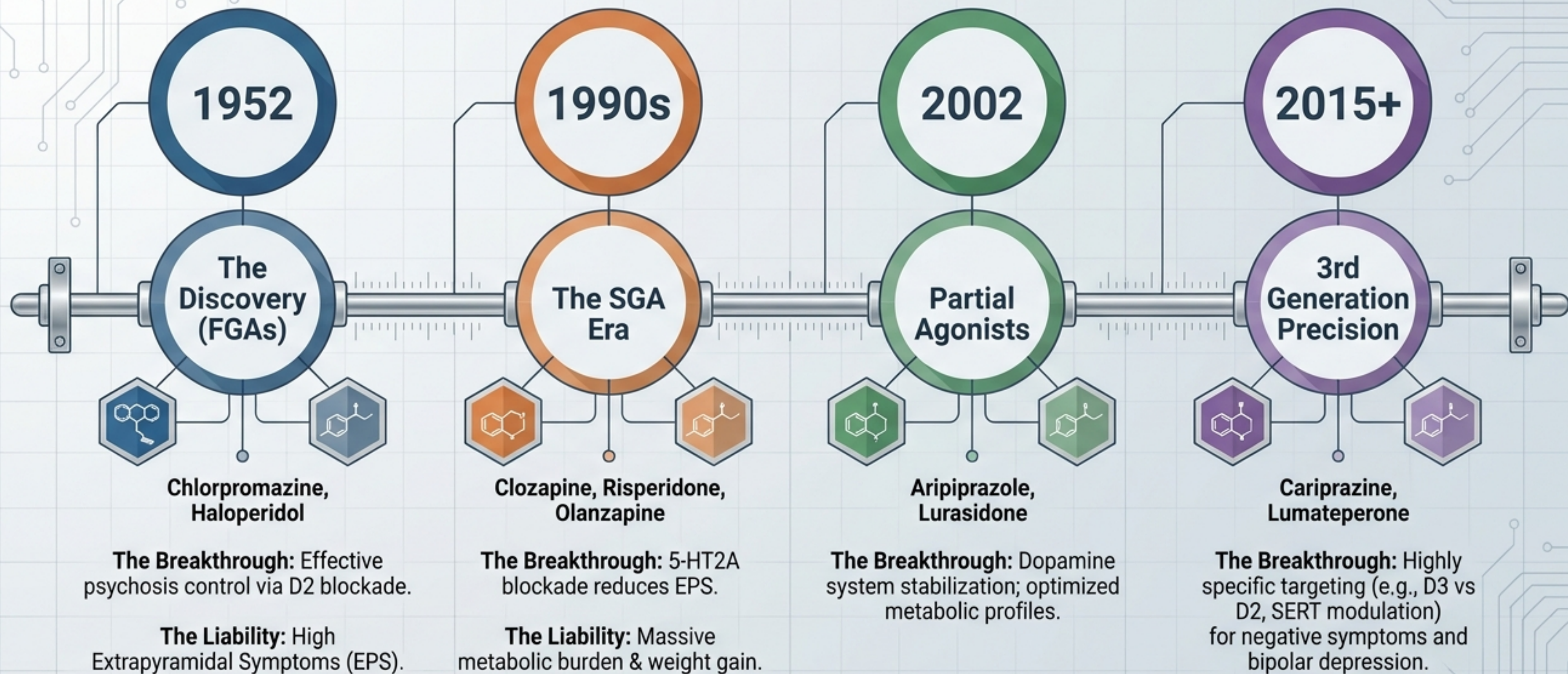


The Clinical Equalizer

A visual reference guide to antipsychotic medications across three generations.

Mechanisms, indications, side effects, selection, and monitoring — from chlorpromazine to lumateperone.



First Generation



The Heavy Switch

Heavy D2 Antagonism.
Occupancy >80% = High EPS Risk.

Second Generation



The Dual Switch

Serotonin-Dopamine Antagonists.
5-HT2A blockade facilitates dopamine release in the nigrostriatal pathway, rescuing EPS.

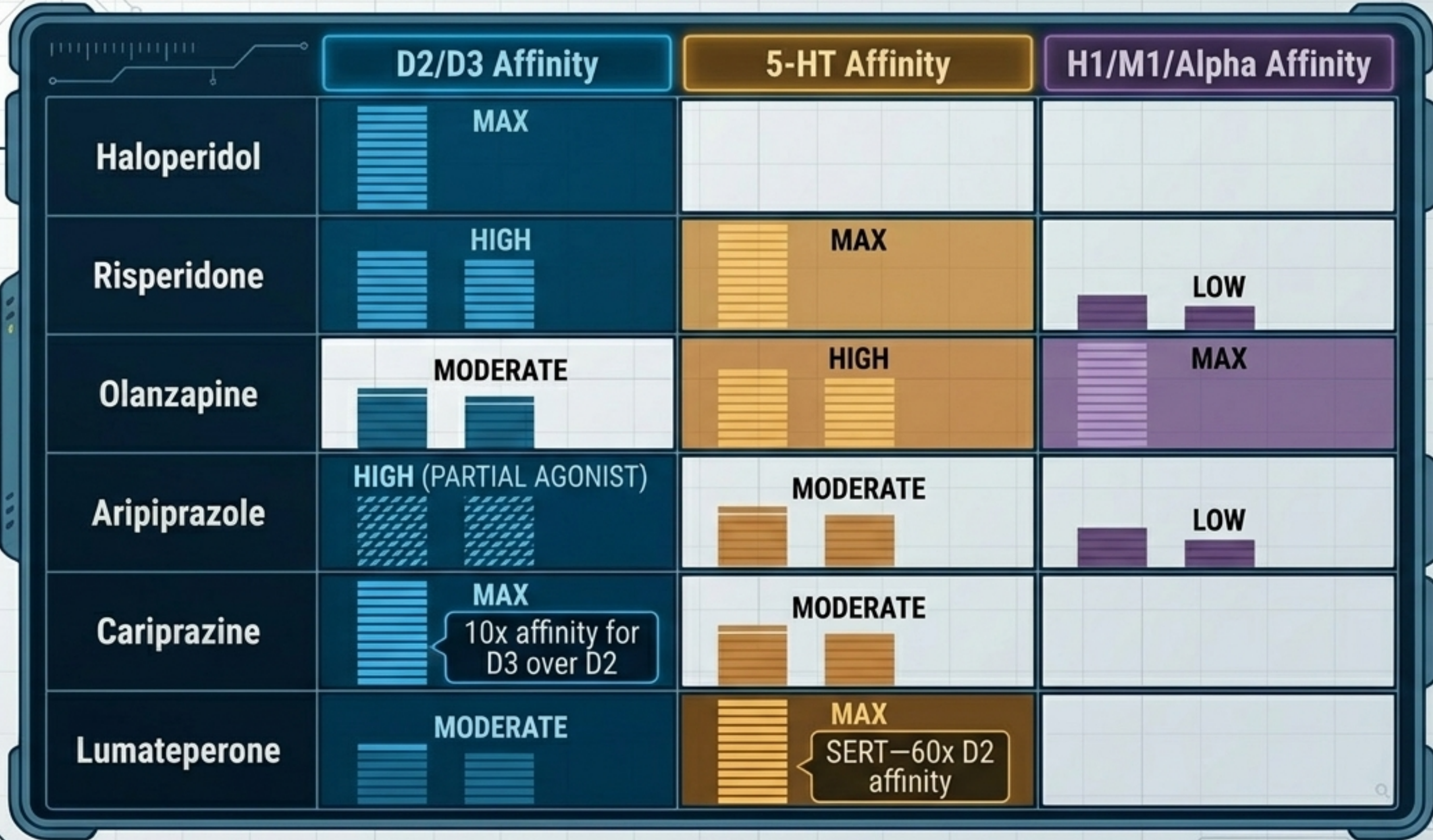
Third Generation



The Smart Thermostat

D2/D3 Partial Agonists
Acts as an antagonist in hyperdopaminergic states (mesolimbic) and an agonist in hypodopaminergic states.

Receptor Affinity Matrix



Half-life:
18-40h

Half-life:
75-146h

Half-life:
Active metabolites
1-3 weeks

The Trade-Off Seesaw

Balancing receptor liabilities in antipsychotic selection.

The D2 Burden



The H1 / M1 / 5-HT2C Burden



Consequences: EPS (Akathisia, Parkinsonism, Dystonia, Tardive Dyskinesia), Prolactin Elevation (Galactorrhea, Amenorrhea).

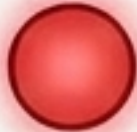








































Highest Risk: Haloperidol, Fluphenazine, Risperidone.

Consequences: Metabolic Syndrome (Weight gain, dyslipidemia), Sedation, Anticholinergic effects.

Highest Risk: Clozapine, Olanzapine, Quetiapine.

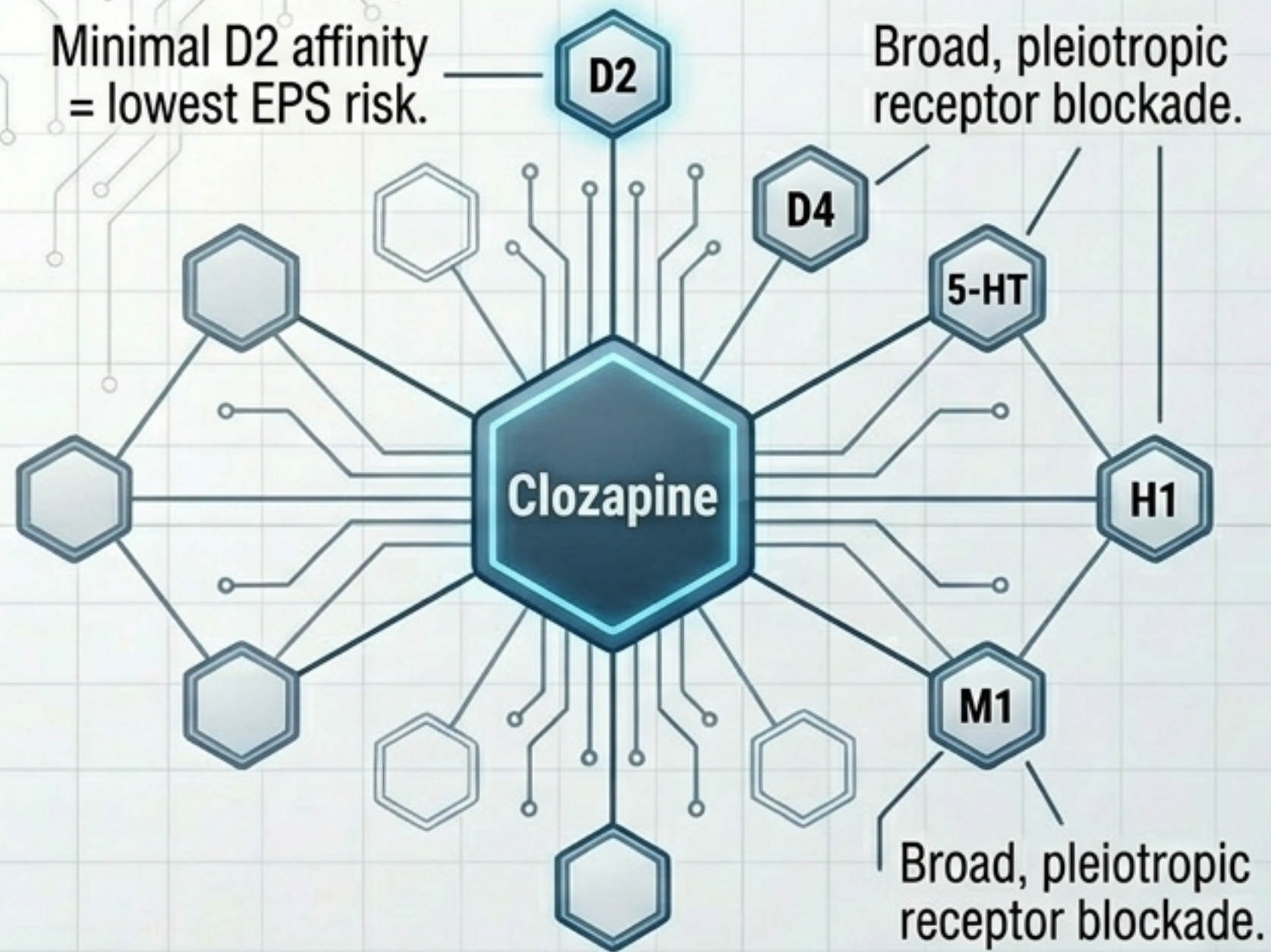
Clinical Takeaway: 40–60% of patients receiving SGAs develop metabolic syndrome criteria after 18 months (CATIE trial).

The Ultimate Side-Effect Heatmap

	EPS	Metabolic	Prolactin	Sedation		QTc	Anticholinergic
Haloperidol							
Risperidone							
Olanzapine							
Aripiprazole			 *				
Clozapine							
Ziprasidone							

Green Circle = Minimal/None. **Yellow Circle** = Moderate. **Red Circle** = Very High.
Asterisk Note: Aripiprazole reduces prolactin levels.

Clozapine: The Pharmacological Outlier



The Standard of Care: Uniquely effective for Treatment-Resistant Schizophrenia (TRS) after 2+ failed adequate trials.
Target Level: 350–600 ng/mL for optimal efficacy.

REMS Protocol
(Agranulocytosis Risk: 1-2%)

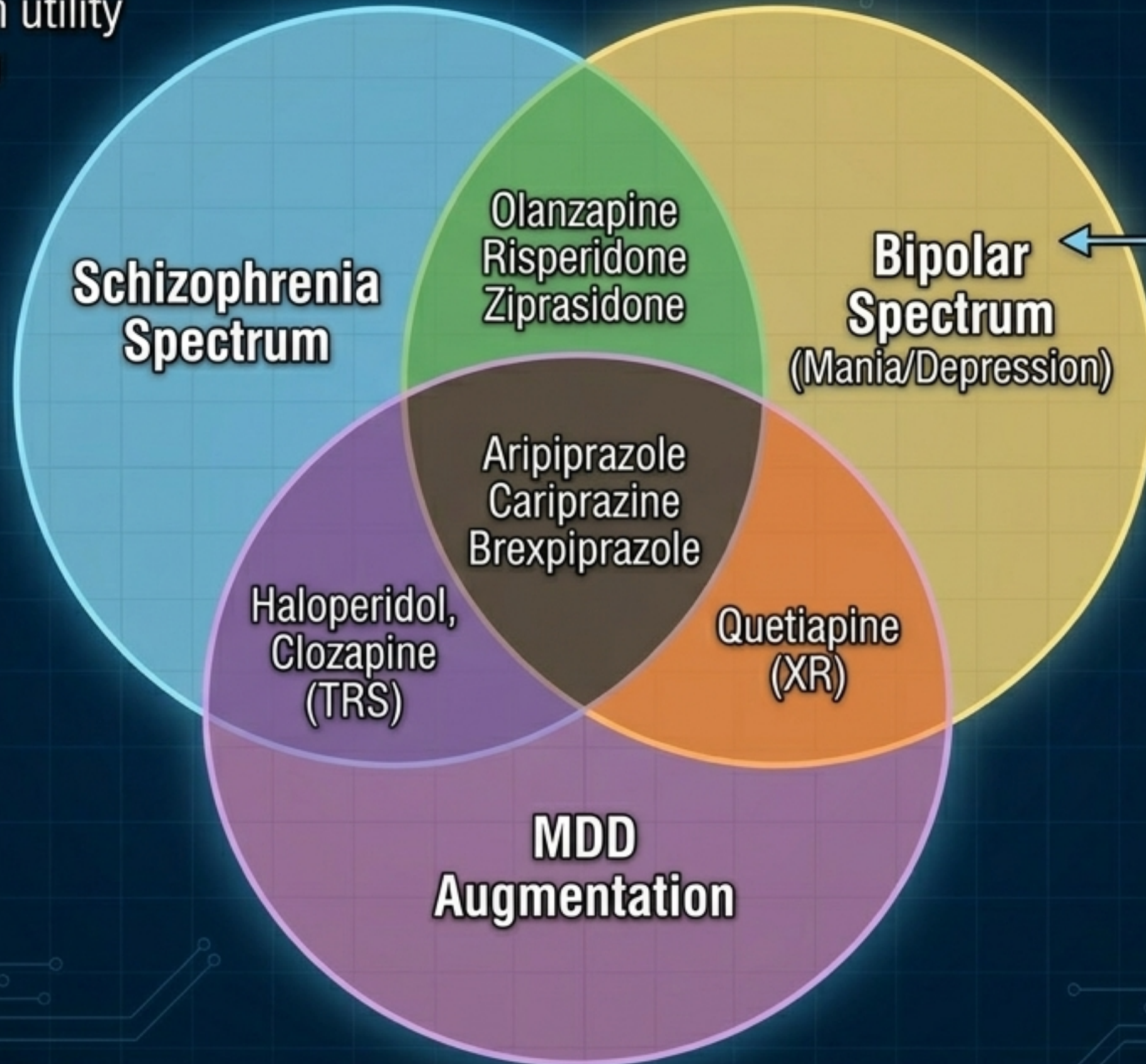
ANC \geq 1500/mm³:
Continue treatment.

ANC $<$ 1000/mm³:
Interrupt immediately.

Weekly (0-6 months) → **Biweekly** (6-12 months) → **Monthly** (ongoing)

FDA Indication Map

Visualizing broad-spectrum utility versus targeted application



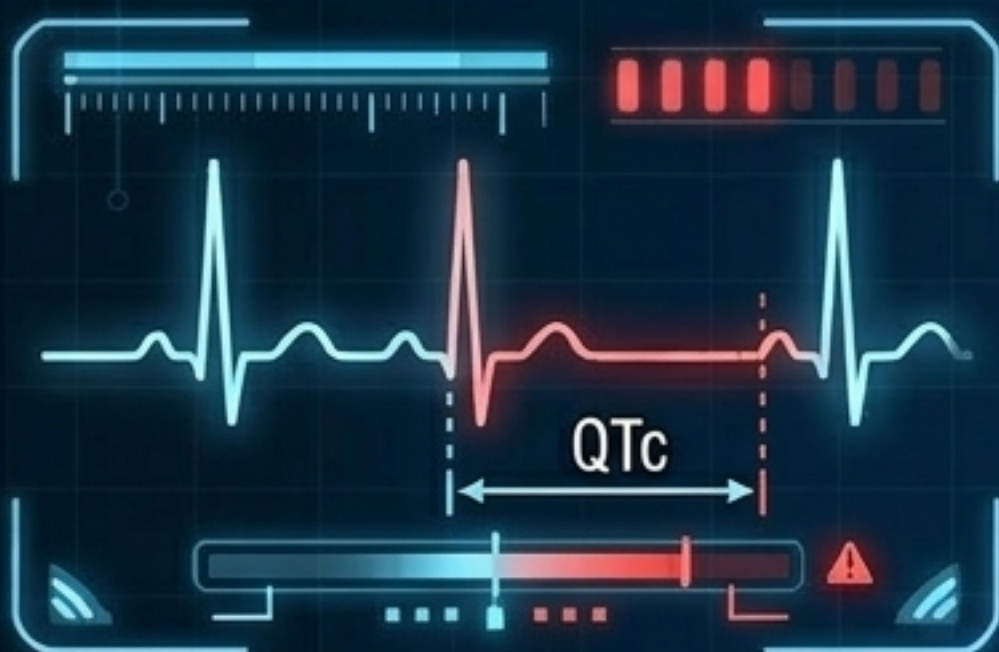
Special Focus:

Lurasidone & Lumateperone are specifically indicated for for Bipolar Depression with highly favorable metabolic profiles.

Specialized Clinical Scenarios

Isolating complications and niche prescribing parameters

The QTc Risk Zone



Highest Risk: Ziprasidone, IV
Haloperidol, Thioridazine

Guideline: Avoid if baseline QTc
is elevated.

Preferred Alternatives:
Aripiprazole, Lurasidone

Food & Absorption Metrics



Clinical Pearl:
Ziprasidone requires a 500+ kcal
meal for adequate absorption.

Niche & Off-Label Uses

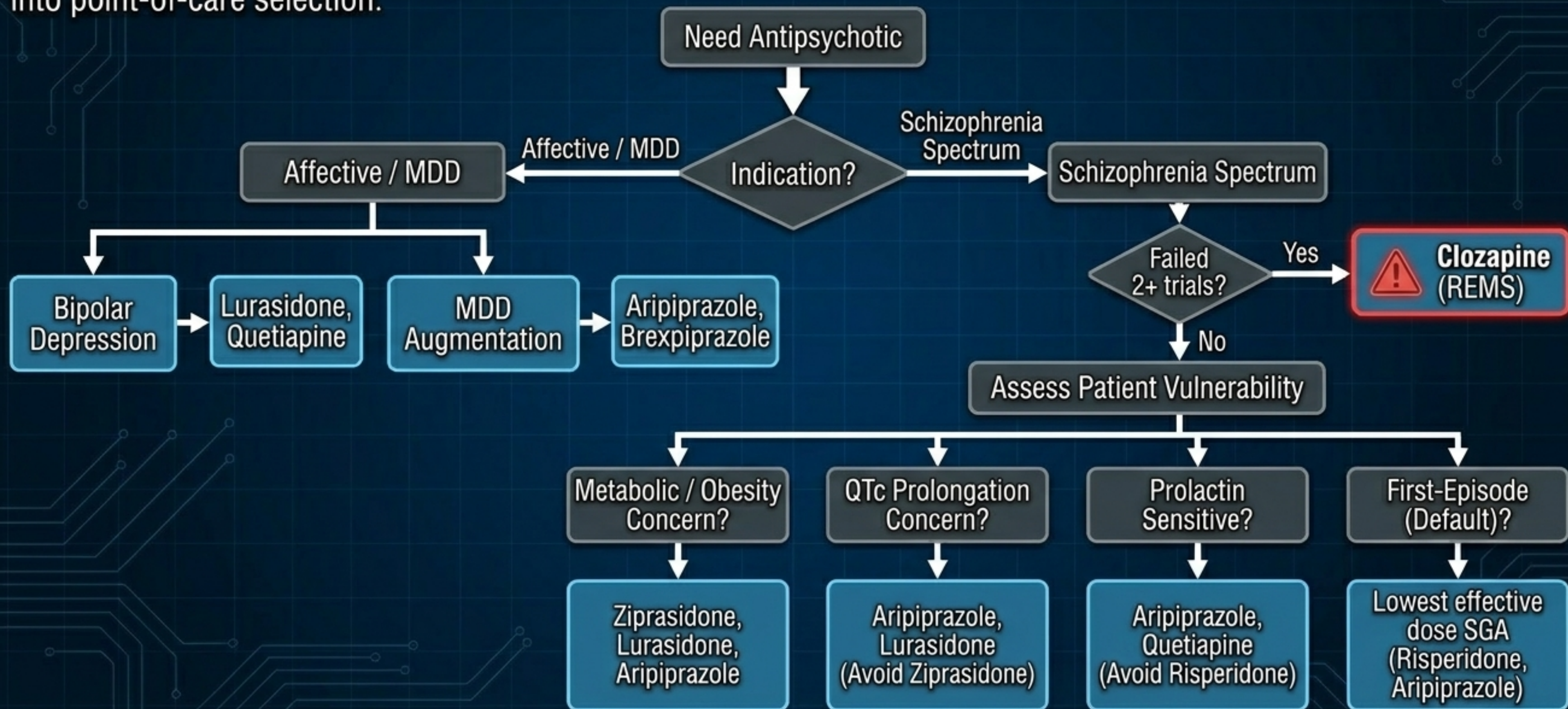


Tourette's / Autism Irritability:
Aripiprazole, Risperidone

⚠️ Elderly / Dementia Warning:
FDA Black Box Warning — 1.6
to 1.7x increased mortality risk.
Requires explicit consent.

Clinical Decision Algorithm

Synthesizing mechanisms and liabilities into point-of-care selection.



Clinical Maintenance & Monitoring

Translating metabolic and movement guidelines into a visual schedule.

Parameter	Baseline	1 Month	3 Months	6 Months	Annually
Weight & BP	✓	✓	✓	✓	✓
Fasting Glucose	✓		✓		✓
Lipid Panel	✓		✓		✓
AIMS (EPS Screen)	✓	✓	✓	✓	✓
Waist Circumference	✓			✓	✓

Focus: Tardive Dyskinesia (TD)

- **Risk Factors:** Older age, cumulative exposure.
- **Protocol:** AIMS administered every 3-6 months.
- **Intervention:** VMAT2 inhibitors (valbenazine) are first-line treatments.

Shared Decision Making & Adherence

Synthesizing receptor pharmacology with the patient's lived experience.

The Reality

74%

All-cause discontinuation across all SGAs at 18 months (CATIE Trial). Patient preference (weight, sedation, sexual function) predicts adherence.

The LAI Bridge



Paliperidone
palmitate

Most flexible
scheduling
(monthly or
3-monthly).



Aripiprazole
monohydrate

Favorable metabolic
and EPS profile.



Olanzapine
pamoate

Post-injection
delirium/sedation
syndrome (PDSS)
requires 3-hour
monitoring.

Closing Thought: True efficacy requires adherence. The 'perfect' receptor profile only works if the patient is willing to take the medication.