

10-Minute Tutorial

ATC

How does it work
When to use caution
How you can use it







Anatomical Therapeutic Chemical Classification

ATC 1 st level:	Anatomical	Dermatologicals
ATC 2 nd level:	Therapeutic	Antibiotics and Chemotherapeutics
ATC 3 rd level:	Therapeutic/pharmacological	Chemotherapeutics for topical use
ATC 4 th level:	Chemical/therapeutic/pharm	Other Chemotherapeutics
ATC 5 th level:	Chemical substance	Metronidazole
RxNorm	Ingredient	metrodinazole
RxNorm	Product	



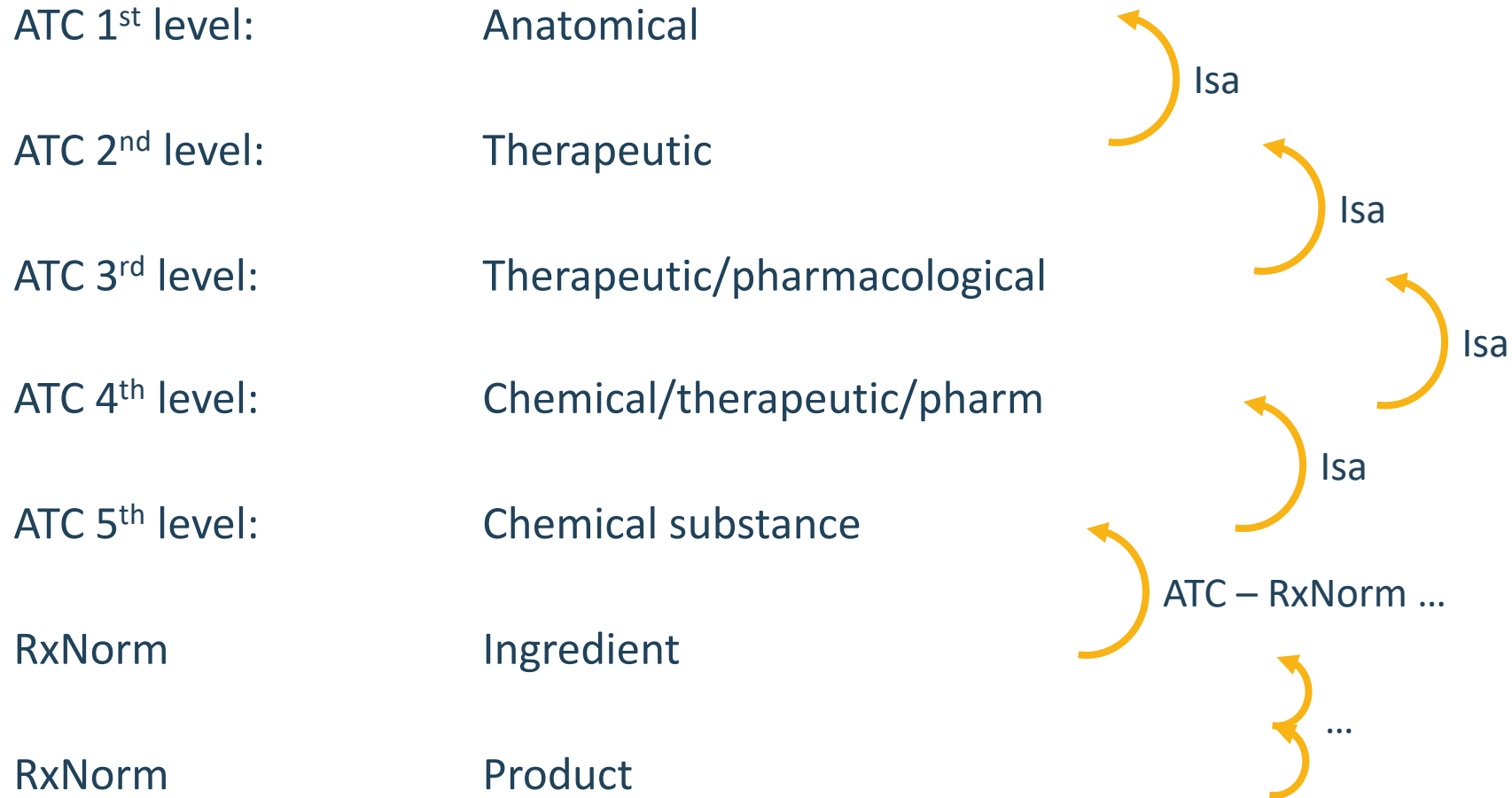


Use CONCEPT_ANCESTOR

ATC 1 st level:	Anatomical	 Ancestor
ATC 2 nd level:	Therapeutic	
ATC 3 rd level:	Therapeutic/pharmacological	
ATC 4 th level:	Chemical/therapeutic/pharm	
ATC 5 th level:	Chemical substance	
RxNorm	Ingredient	 Descendant
RxNorm	Product	



Use CONCEPT_RELATIONSHIP





You are done!

Not yet.



Metronidazole

ATC 1 st	Dermatologicals
ATC 2 nd	Antibiotics and Chemothera-peutics
ATC 3 rd	Chemothera-peutics for topical use
ATC 4 th	Other Chemothera- pueutics
ATC 5 th	Metronidazole



1. Exists more than once

ATC 1 st	Dermatologicals	Alimentary Tract and Metabolism	Antiparasitics, Insecticides and Repellents	Antiinfectives for Systemic Use	Genito Urinary System and Sex Hormones
ATC 2 nd	Antibiotics and Chemotherapeutics	Stomatological Preparations	Antiprotozoals	Antibacterials for Systemic Use	Gynecological Antiinfectives and Antiseptics
ATC 3 rd	Chemotherapeutics for topical use	Stomatological Preparations	Agents Against Amoebiasis and other Protozoal Diseases	Other Antibacterials	Antiinfectives and Antiseptics, ex. Combinations with Steroids
ATC 4 th	Other Chemotherapeutics	Antiinfectives and Antiseptics for Local Oral	Nitroimidazole Derivatives	Imidazole Derivatives	Imidazole Derivatives
ATC 5 th			Metronidazole		
	D06BX01	A01AB17	P01AB01	J01XD01	G01AF01



2. Exists in fixed combinations

ATC 1st Dermatologicals

ATC 2nd Antibiotics and
Chemotherapeutics

ATC 3rd Chemotherapeutics
for topical use

ATC 4th Other Chemotherapeutics

ATC 5th Metronidazole

Antibacterials

Antiinfectives for Systemic Use

Eradication Of Helicobacter Pylori

Antiparasitic Products, Insecticides and Repellents

bismuth subcitrate, tetracycline and **metronidazole**

cefuroxime and **metronidazole**

ciprofloxacin and **metronidazole**

lansoprazole, amoxicillin and **metronidazole**

lansoprazole, tetracycline and **metronidazole**

omeprazole, amoxicillin and **metronidazole**

pantoprazole, amoxicillin, clarithromycin and **metronidazole**

rabeprazole, amoxicillin and **metronidazole**

spiramycin and **metronidazole**

vonoprazan, amoxicillin and **metronidazole**



3. Exists in fixed combination inside class

ATC 1st Dermatologicals

ATC 2nd Antibiotics and
Chemotherapeutics

ATC 3rd Chemotherapeutics
for topical use

ATC 4th Other Chemotherapeutics

ATC 5th Metronidazole

Ophthalmologicals
Otologicals

betamethasone and antiinfectives
chloroprednisone and antiinfectives
clobetasone and antiinfectives
dexamethasone and antiinfectives
diclofenac and antiinfectives
fludrocortisone and antiinfectives
flumetasone and antiinfectives
fluocinolone acetonide and antiinfectives
fluocortolone and antiinfectives
fluorometholone and antiinfectives
hydrocortisone and antiinfectives
indometacin and antiinfectives
methylprednisolone and antiinfectives
prednisolone and antiinfectives
triamcinolone and antiinfectives



4. Exists in fixed combinations with random classes

ATC 1st Dermatologicals

ATC 2nd Antibiotics and
Chemotherapeutics

ATC 3rd Chemotherapeutics
for topical use

ATC 4th Other Chemotherapeutics

ATC 5th Metronidazole

lansoprazole, combinations

nystatin, combinations

oxytetracycline, combinations

penicillins, combinations with other antibacterials

rabeprazole, combinations

scopolamine, combinations

sulfonamides, combinations with other antibacterials

(excl. trimethoprim)



5. Exists in random combinations

ATC 1st Dermatologicals

ATC 2nd Antibiotics and
Chemotherapeutics

ATC 3rd Chemotherapeutics
for topical use

ATC 4th Other Chemotherapeutics

ATC 5th Metronidazole

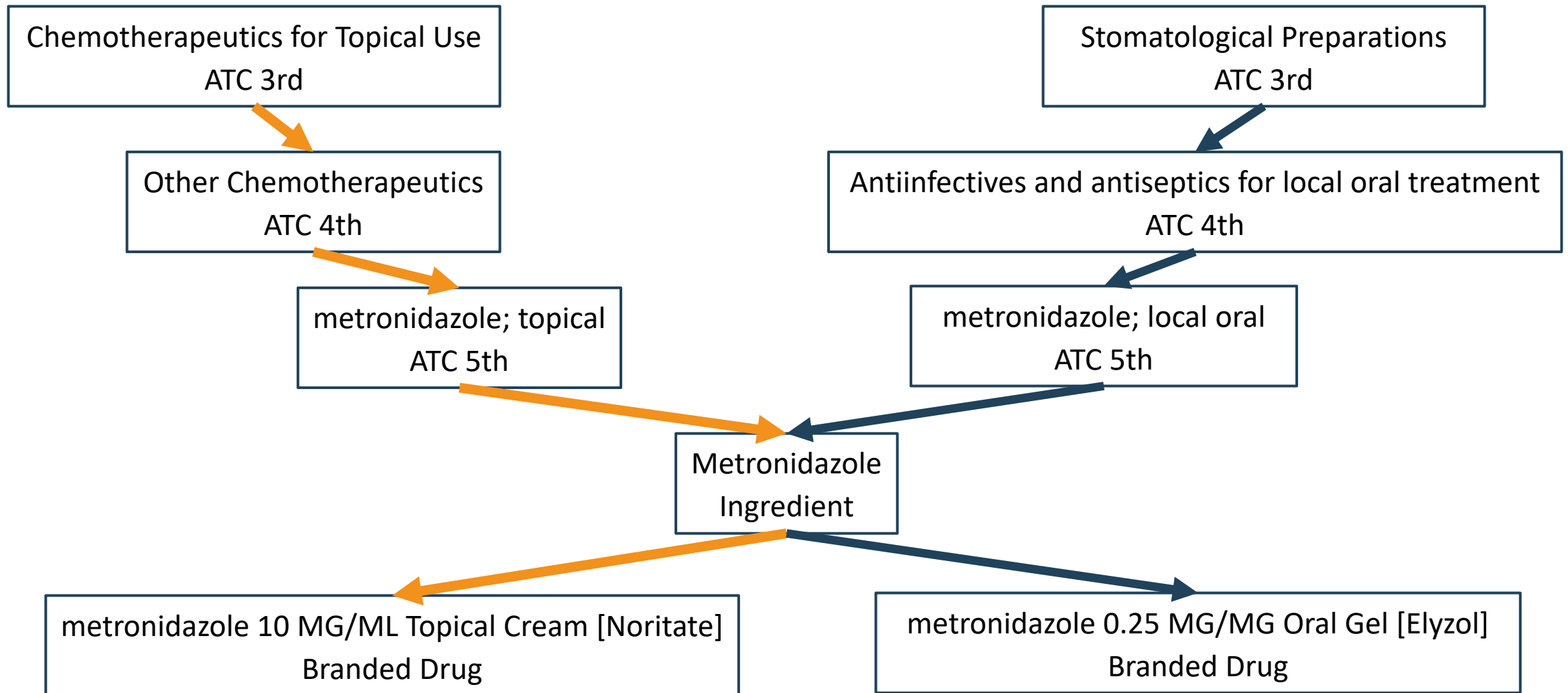
antiinfectives, combinations

antiinfectives, combinations; ophthalmic

combinations of imidazole derivatives



The Hierarchy is Asymmetrical





You can map from ATC

metronidazole; local oral

ATC 5th

Maps to

metronidazole

RxNorm Ingredient

metronidazole, combinations

ATC 5th

Maps to

metronidazole

RxNorm Ingredient

But

antiinfectives, combinations; ophthalmic

ATC 5th

betamethasone and antiinfectives; ophthalmic

ATC 5th

Maps to

betamethasone

RxNorm Ingredient



ATC has holes

- 687 (**13%**) of 5191 ATC5 have no RxNorm
- 13,279 (**74%**) of 17,966 RxNorm Ingredients have no ATC
- 132,077 (**37%**) of 358,379 RxNorm Drugs have no ATC



Take home messages

1. Metronidazole is more than once in ATC
 2. In 35 out of 51 ATC concepts, the word “Metronidazole” is not even mentioned, but might still be encoded
 3. The hierarchy is asymmetrical: The child of your child is not always your grandchild
 4. ATC5s are mapped to ingredients, but only if they are unambiguous
 5. ATC has holes
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