

# SNOMED Eye Care CRG – May 2023 – Update on Glaucoma Medications Work

**Anthony Khawaja, Ian Rodrigues and Elaine Wooler  
London, UK**

# Scope of Glaucoma Medications SNOMED Work

- Check all relevant drug terms are available internationally
  - Assume laterality is post-coordinated
- Assume treatment parameters will be recorded in EMR and do not necessarily require SNOMED coding:
  - Dose (i.e. 1 drop),
  - Frequency of use,
  - Start/stop dates,
  - ?Reason for stopping
- ? Needs a preferred reference list

# Product-based vs Dose-based Prescribing

		<b>Medication</b>	<b>Strength, Form, (presentation)</b>	<b>Brand and Supplier</b>
<b>VTM</b>	<b>Virtual Therapeutic Moiety</b>	Bimatoprost	-	-
<b>VMP</b>	<b>Virtual Medicinal Product</b>	Bimatoprost	100 microgram/ml eye drops	-
<b>AMP</b>	<b>Actual Medicinal Product</b>	Bimatoprost	100 microgram/ml eye drops	Lumigan (AbbVie Ltd)

Search

Options

Search Mode: Partial matching search mode

Status: Active components only

Group by concept

Filter results by Language

english 188

Filter results by Semantic Tag

product 160

medicinal product 12

medicinal product form 8

clinical drug 6

substance 2

Filter results by Module

SNOMED CT United Kingdom drug extension module (core metadata concept) 160

SNOMED CT core module (core metadata concept) 24

SNOMED CT United Kingdom Edition module (core metadata concept) 4

Filter results by Refset

Allergy or adverse effect causative agent simple reference set (foundation metadata concept) 188

National Health Service Care Record Element association reference set (foundation metadata concept) 188

Manufactured material simple 160

Type at least 3 characters

bimatoprost

188 matches found in 0.059 seconds.

Bimatoprost	Product containing only bimatoprost (medicinal product)
Bimatoprost	Bimatoprost (substance)
Bimatoprost + Timolol	Product containing only bimatoprost and timolol (medicinal product)
Bimatoprost (product)	Product containing only bimatoprost (medicinal product)
Bimatoprost (substance)	Bimatoprost (substance)
Bimatoprost only product	Product containing only bimatoprost (medicinal product)
Bimatoprost-containing product	Product containing bimatoprost (medicinal product)
Bimatoprost + Timolol (product)	Product containing only bimatoprost and timolol (medicinal product)
Bimatoprost and timolol only product	Product containing only bimatoprost and timolol (medicinal product)
Bimatoprost 300micrograms/ml eye drops	Bimatoprost 300micrograms/ml eye drops (product)
Bimatoprost 100 microgram/mL eye drops	Product containing precisely bimatoprost 100 microgram/1 milliliter conventional release eye drops (clinical drug)
Bimatoprost 300 microgram/mL eye drops	Product containing precisely bimatoprost 300 microgram/1 milliliter conventional release eye drops (clinical drug)
Bimatoprost 100micrograms/ml eye drops	Bimatoprost 100micrograms/ml eye drops (product)
Bimatoprost 300micrograms/ml eye drops 9 ml	Bimatoprost 300micrograms/ml eye drops 9 ml (product)
Bimatoprost 100micrograms/ml eye drops 3 ml	Bimatoprost 100micrograms/ml eye drops 3 ml (product)
Bimatoprost- and timolol-containing product	Product containing bimatoprost and timolol (medicinal product)
Bimatoprost 100micrograms/ml eye drops 9 ml	Bimatoprost 100micrograms/ml eye drops 9 ml (product)

Search 🔍

Options

Search Mode: Partial matching search mode

Status: Active components only

Group by concept

Filter results by Language

english 92

Filter results by Semantic Tag

product 80

medicinal product 4

medicinal product form 4

clinical drug 3

substance 1

Filter results by Module

SNOMED CT United Kingdom drug extension module (core metadata concept) 80

SNOMED CT core module (core metadata concept) 10

SNOMED CT United Kingdom Edition module (core metadata concept) 2

Filter results by Refset

Allergy or adverse effect causative agent simple reference set (foundation metadata concept) 92

National Health Service Care Record Element association reference set (foundation metadata concept) 92








Manufactured material simple reference set (foundation metadata concept) 80

National Health Service dictionary of 35

Type at least 3 characters ✓ Example: shou fra

bimatoprost

92 matches found in 0.02 seconds.

 Bimatoprost	Product containing only bimatoprost (medicinal product)
Bimatoprost	Bimatoprost (substance)
 Bimatoprost + Timolol	Product containing only bimatoprost and timolol (medicinal product)
Bimatoprost-containing product	Product containing bimatoprost (medicinal product)
Bimatoprost 300micrograms/ml eye drops	Bimatoprost 300micrograms/ml eye drops (product)
 Bimatoprost 100 microgram/mL eye drops	Product containing precisely bimatoprost 100 microgram/1 milliliter conventional release eye drops (clinical drug)
 Bimatoprost 300 microgram/mL eye drops	Product containing precisely bimatoprost 300 microgram/1 milliliter conventional release eye drops (clinical drug)
Bimatoprost 100micrograms/ml eye drops	Bimatoprost 100micrograms/ml eye drops (product)
Bimatoprost 300micrograms/ml eye drops 9 ml	Bimatoprost 300micrograms/ml eye drops 9 ml (product)
Bimatoprost 100micrograms/ml eye drops 3 ml	Bimatoprost 100micrograms/ml eye drops 3 ml (product)
 Bimatoprost- and timolol-containing product	Product containing bimatoprost and timolol (medicinal product)
Bimatoprost 100micrograms/ml eye drops 9 ml	Bimatoprost 100micrograms/ml eye drops 9 ml (product)
Bimatoprost 300micrograms/ml eye drops 3 ml	Bimatoprost 300micrograms/ml eye drops 3 ml (product)
 Bimatoprost only product in ocular dose form	Product containing only bimatoprost in ocular dose form (medicinal product form)
 Bimatoprost-containing product in ocular dose form	Product containing bimatoprost in ocular dose form (medicinal product form)
Bimatoprost 100micrograms/ml eye drops (Sandoz Ltd)	Bimatoprost 100micrograms/ml eye drops (Sandoz Ltd) (product)
Bimatoprost 100micrograms/ml eye drops	Bimatoprost 100micrograms/ml eye drops

Search



Options

Search Mode: Partial matching search mode

Status: Active components only

Group by concept

clinical drug

Filter results by Language

english

3

Filter results by Module

SNOMED CT core module (core metadata concept)

3

Filter results by Refset

Allergy or adverse effect causative agent simple reference set (foundation metadata concept)

3

CTV3 to SNOMED CT simple map reference set (foundation metadata concept)

3

National Health Service Care Record Element association reference set (foundation metadata concept)

3

REPLACED BY association reference set (foundation metadata concept)

1

Type at least 3 characters Example: shou fra

bimatoprost

3 matches found in 0.017 seconds.

Bimatoprost 100 microgram/mL eye drops

Product containing precisely bimatoprost 100 microgram/1 milliliter conventional release eye drops (clinical drug)

Bimatoprost 300 microgram/mL eye drops

Product containing precisely bimatoprost 300 microgram/1 milliliter conventional release eye drops (clinical drug)

Bimatoprost 300 microgram/mL and timolol (as timolol maleate) 5 mg/mL eye drops

Product containing precisely bimatoprost 300 microgram/1 milliliter and timolol (as timolol maleate) 5 milligram/1 milliliter conventional release eye drops (clinical drug)

All 3 results are displayed

# Product-based vs Dose-based Prescribing

		Medication	Strength, Form, (presentation)	Brand and Supplier
<b>VTM</b>	<b>Virtual Therapeutic Moiety</b>	Bimatoprost	-	-
<b>VMP</b>	<b>Virtual Medicinal Product</b>	Bimatoprost	100 microgram/ml eye drops	-
<b>AMP</b>	<b>Actual Medicinal Product</b>	Bimatoprost	100 microgram/ml eye drops	Lumigan (AbbVie Ltd)

Glaucoma Preferred Clinical Drug Terms\_January 2024

Drug Class	SCTID	Recommended Clinical Drug Term Name	Class
<b>Prostaglandin Agonists</b>	1187384007	Bimatoprost 100 microgram/mL eye drops	VMP
	407891009	Bimatoprost 300 microgram/mL eye drops	VMP
	330729005	Latanoprost 50 microgram/mL eye drops	VMP
	704471008	Tafluprost 15 microgram/mL eye drops	VMP
	407803003	Travoprost 40 microgram/mL eye drops	VMP
	410847002	Unoprostone isopropyl 1.5 mg/mL eye solution	VMP
<b>Beta-Blockers</b>	330614001	Betaxolol (as betaxolol hydrochloride) 2.5 mg/mL eye drops	VMP
	330620000	Betaxolol (as betaxolol hydrochloride) 5 mg/mL eye drops	VMP
	766407004	Timolol (as timolol maleate) 1 mg/mL eye gel	VMP
	330720009	Timolol (as timolol maleate) 2.5 mg/mL eye drops	VMP
	766408009	Timolol (as timolol maleate) 2.5 mg/mL eye gel	VMP
	330721008	Timolol (as timolol maleate) 5 mg/mL eye drops	VMP
	766409001	Timolol (as timolol maleate) 5 mg/mL eye gel	VMP
<b>Carbonic Anhydrase Inhibitors</b>	330601002	Acetazolamide 125 mg oral tablet	VMP
	376293003	Acetazolamide 250 mg oral tablet	VMP
	765960002	Acetazolamide 250 mg prolonged-release oral capsule	VMP
	766084001	Acetazolamide 500 mg powder for solution for injection vial	VMP
	330738007	Brinzolamide 10 mg/mL eye drops	VMP
	330726003	Dorzolamide (as dorzolamide hydrochloride) 20 mg/mL eye solution	VMP
<b>Alpha-agonists</b>	1193875001	Apraclonidine (as apraclonidine hydrochloride) 10 mg/mL eye drops	VMP
	330873002	Apraclonidine (as apraclonidine hydrochloride) 5 mg/mL eye drops	VMP
	417907006	Brimonidine tartrate 1 mg/mL eye solution	VMP
	374502000	Brimonidine tartrate 1.5 mg/mL eye solution	VMP
	330731001	Brimonidine tartrate 2 mg/mL eye drops	VMP



Glaucoma Preferred Clinical Drug Terms\_January 2024

Drug Class	SCTID	Recommended Clinical Drug Term Name	Class
<b>Miotics</b>	347200009	Pilocarpine hydrochloride 1 mg/mL eye drops	VMP
	330679001	Pilocarpine hydrochloride 10 mg/mL eye drops	VMP
	387753000	Pilocarpine hydrochloride 100 mg/mL eye solution	VMP
	347201008	Pilocarpine hydrochloride 2.5 mg/mL eye drops	VMP
	330680003	Pilocarpine hydrochloride 20 mg/mL eye drops	VMP
	330681004	Pilocarpine hydrochloride 30 mg/mL eye drops	VMP
	330694002	Pilocarpine hydrochloride 40 mg/g eye gel	VMP
	330682006	Pilocarpine hydrochloride 40 mg/mL eye drops	VMP
	347208002	Pilocarpine hydrochloride 60 mg/mL eye drops	VMP
	347210000	Pilocarpine hydrochloride 80 mg/mL eye drops	VMP
1142211002	Pilocarpine nitrate 20 mg/mL eye drops	VMP	
<b>Rho</b>	781274003	Netarsudil only product in ocular dose form Ripasudil	VMP
<b>Fixed dose combinations</b>	1177103000	Bimatoprost 300 microgram/mL and timolol (as timolol maleate) 5 mg/mL eye drops	VMP
	784822005	Brimonidine tartrate 2 mg/mL and timolol 5 mg/mL eye solution	VMP
	25502411000001106	Brinzolamide + Brimonidine	VTM
	15465711000001103	Brinzolamide + Timolol	VTM
	330734009	Dorzolamide (as dorzolamide hydrochloride) 20 mg/mL and timolol (as timolol maleate) 5 mg/mL eye drops	VMP
	408614000	Latanoprost 50 microgram/mL and timolol (as timolol maleate) 5 mg/mL eye drops	VMP
	41968011000001108	Latanoprost 50micrograms/ml / Netarsudil 200micrograms/ml eye drops	VMP
	779662002	Latanoprostene bunod only product in ocular dose form	VMP
	29922111000001106	Tafluprost 15micrograms/ml / Timolol 5mg/ml eye drops 0.3ml unit dose preservative free	VMP
1177100002	Timolol (as timolol maleate) 5 mg/mL and travoprost 40 microgram/mL eye drops	VMP	

# Other considerations

- Medication adherence – takes, does not take, forgets, refuses medication [finding]
- Self-administration of medication (procedure) [*SCTID: 225425006*] – could be post-coordination of VMP

# Next Steps

- Tidy up and complete Recommended Clinical Drug Term List:
  1. Create (if not already present) SNOMED “clinical drug” code for “Ripasudil 4mg/ml eye drops”
  2. Create SNOMED “clinical drug” code for “Netarsudil 200 micrograms/ml eye drops”
  3. Create SNOMED “clinical drug” code for “Latanoprostene bunod 240 micrograms/ml eye drops”
  4. Create SNOMED “clinical drug” code for “Tafluprost 15micrograms/ml and Timolol 5mg/ml eye drops”
  5. Create SNOMED “clinical drug” code for “Brinzolamide 10mg/ml and brimonidine 2mg/ml eye drops ”
  6. Create SNOMED “clinical drug” code for “Brinzolamide 10mg/ml and timolol (as timolol maleate) 5 mg/mL eye drops”