




## Bimatoprost for Beauty: Using Latisse™ to Lengthen Lashes

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## GOALS AND OBJECTIVES

- ✦ Define hypotrichosis
- ✦ Understand the pharmacology behind bimatoprost (Latisse™)
- ✦ Recognize the contraindications, warnings and precautions of bimatoprost (Latisse™)
- ✦ Recognize the side effects of bimatoprost (Latisse™)



## LATISSE™

- ✦ Latisse™ (bimatoprost ophthalmic solution 0.3 mg/ml) is indicated for the treatment of hypotrichosis of the eyelashes
  - HYPOTRICHOSIS: inadequate hair growth
- ✦ Increases eyelash length, fullness, thickness, and darkness
- ✦ Onset of effect is gradual





## APPLICATION OF LATISSE™


- ✦ Apply nightly to both eyes
  - Ensure face is clean
  - Place one drop applicator
  - Apply evenly along the skin of the upper eyelid margin at the base of the eyelash
    - ✦ Dispose of the applicator
  - Blot any excess solution beyond the eyelid margin
  - Repeat on the opposite eyelid
    - ✦ With a new applicator





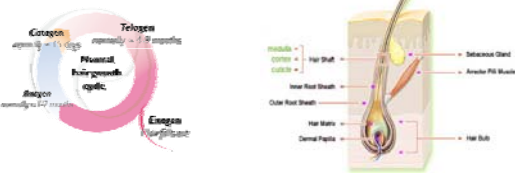
### USE OF LATISSE™

- ♦ Do not apply to the lower lashes
- ♦ Additional applications will NOT increase the growth of eyelashes
- ♦ Upon discontinuation of treatment, eyelash growth is expected to return to its pre-treatment level
- ♦ Do not reuse applicators
- ♦ Remove contact lenses before use
  - May be reinserted 15 minutes following administration




### CLINICAL PHARMACOLOGY

- ♦ Mechanism of action
  - Synthetic prostaglandin analog
  - ♦ Increased eyelash growth




- ♦ Reduction of IOP



### CLINICAL PHARMACOLOGY

- ♦ Pharmacokinetics
  - Blood concentrations peak within 10 minutes
    - Mean Cmax = 0.08ng/ml
    - Mean AUC = 0.09ng\*hr/ml
  - Blood concentrations are undetectable within 1.5 hours
  - No significant systemic drug accumulation overtime




### EFFICACY




### EFFICACY


- ♦ One clinical study (unpublished)
  - Multicenter, double-masked, randomized, vehicle-controlled, parallel study
  - 278 patients for four months of treatment
  - Primary efficacy endpoint
    - ♦ Increase in overall eyelash prominence as measured by at least a 1-grade increase on the 4-point Global Eyelash Assessment (GEA) scale from baseline

Global Eyelash Assessment Scale	
1	Minimal (includes everything up to minimal/worst possible/none)
2	Moderate
3	Marked
4	Very Marked



### EFFICACY

Patients with at least a 1 grade increase in GEA from baseline			
Week	LATISSE™ n=137(%)	VEHICLE N=141(%)	P-VALUE
1	7(5)	3(2)	0.2124
4	20(15)	11(8)	0.0719
8	69(50)	21(15)	<0.0001
12	95(69)	28(20)	<0.0001
16	107(78)	26(18)	<0.0001
20	103(79)	27(21)	<0.0001



## EFFICACY

Patients with at least a 2 grade increase in GEA from baseline

Week	LATISSE™ n=137(%)	VEHICLE N=141(%)	P-VALUE
1	0(0)	0(0)	N/A
4	0(0)	0(0)	N/A
8	5(3.6)	1(0.7)	0.1164
12	28(20.4)	1(0.7)	<0.0001
16	45(32.5)	2(1.4)	<0.0001
20	49(37.4)	4(3.2)	<0.0001

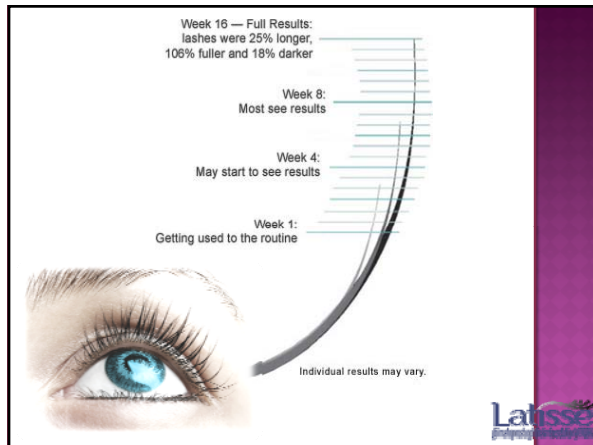


## EFFICACY

- Patients were also evaluated for the effect on the length, thickness, and darkness of their eyelashes
- Statistically significant increase, as measured by digital image analysis, in the length, thickness, and darkness at 8, 12, and 16 weeks

Mean change from baseline (week 16)	LATISSE™	VEHICLE
Eyelash growth (length) mm (% increase)	N=137 1.4 (25)	N=141 0.1 (2)
Fullness/thickness mm <sup>2</sup> (% increase)	N=136 0.7 (106)	N=140 0.1 (12)
Darkness Intensity* (% increase)	N=135 -20.2 (-18)	N=138 -3.6 (-3)

\*A negative value represents eyelash darkening



## EFFICACY IN ALOPECIA AREATA

- Well tolerated but not effective
  - Ochoa, B, Sah, D et al
  - 2 patients experienced some bilateral eyelash growth
  - Not effective in 5 patients
- Case study
  - Zaheri, S, Hughes, B
  - Bilateral hair re-growth in a 13 year old female
- Well tolerated by not effective in 11 patients
  - Roseborough, I, Lee, H et al



## CONTRAINDICATIONS

- Hypersensitivity

## WARNINGS/PRECAUTIONS

- Concurrent administration of Latisse™ and intraocular pressure lowering prostaglandin analogs in ocular hypertensive patients
- Pigmentation of the eyelids and iris may occur





## ADVERSE EFFECTS

- Lowers intraocular pressure (IOP)
  - Exposure to the eye to more than one dose of bimatoprost daily may decrease the IOP lowering effect
- In patients using Lumigan® or other prostaglandin analogs for the treatment of elevated IOP, the concomitant use of Latisse™ may interfere with the reduction in IOP





### ADVERSE EFFECTS

- ✦ Increased brown iris pigmentation
  - Due to increased melanin content in the melanocytes
- Likely to be permanent
  - ✦ Long term effects are unknown
  - ✦ Iris color changes may not be noticeable for several months to years
- Iris pigmentation was not reported in clinical studies with Latisse™
  - ✦ Occurred when bimatoprost ophthalmic solution (Lumigan®) was instilled directly into the eye (1-3%)


### ADVERSE EFFECTS

- ✦ Increased lid pigmentation/darkening (2.9%)
  - Increases as long as bimatoprost is administered, but usually reversible upon discontinuation
- ✦ Hair growth outside the treatment area
  - Hair growth can occur in any area where Latisse® comes in repeated contact with the skin
  - ✦ Blot any excess Latisse™ to avoid



### ADVERSE EFFECTS

- ✦ Pruritis/ocular irritation (3.6%)
- ✦ Conjunctival hyperemia (3.6%)
- ✦ Can exacerbate intraocular inflammation
- ✦ Macular edema has been reported
- ✦ Dry eye (2.2%)



### OTHER INFORMATION

- ✦ Use in pregnancy
  - Category C
  - PGs can cause pregnancy termination
- ✦ Nursing mothers
  - It is not known whether bimatoprost is excreted in human milk
  - ✦ Animal studies have shown positive excretion
- ✦ COST of bimatoprost
  - Latisse™
    - ✦ \$120.00 (3ml)
  - Lumigan®
    - ✦ \$153.35 (5ml)

### TRUE/FALSE QUESTIONS

**Q:** Latisse™ has the same active ingredient as Lumigan®


**A:** TRUE

**Q:** The increased brown iris pigmentation that can be seen with bimatoprost is reversible

**A:** FALSE

**Q:** Bimatoprost, a prostaglandin analog can increase intraocular pressure and worsen glaucoma

**A:** FALSE



### REFERENCES

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