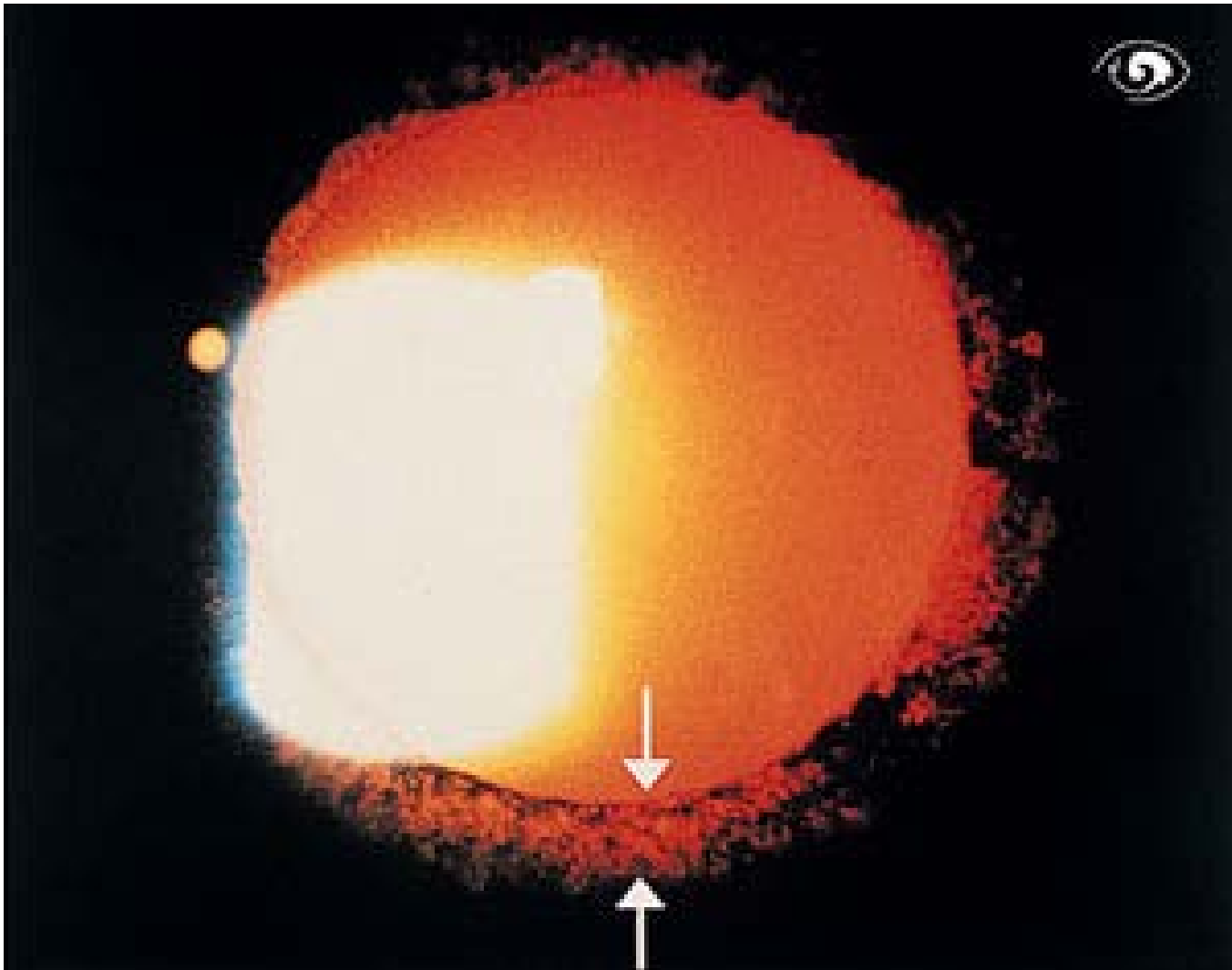


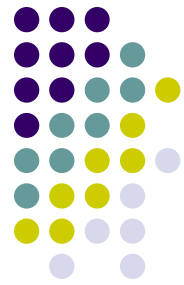
A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
	<p><i>Is pseudoexfoliation syndrome a closed-angle form of glaucoma?</i> No, it is a secondary open-angle glaucoma</p> <p><i>Why is the angle narrowed in PXS?</i> The compromised status of the zonular apparatus allows the lens-iris diaphragm to move forward</p>	



Pseudoexfoliation syndrome: 'Moth eaten'

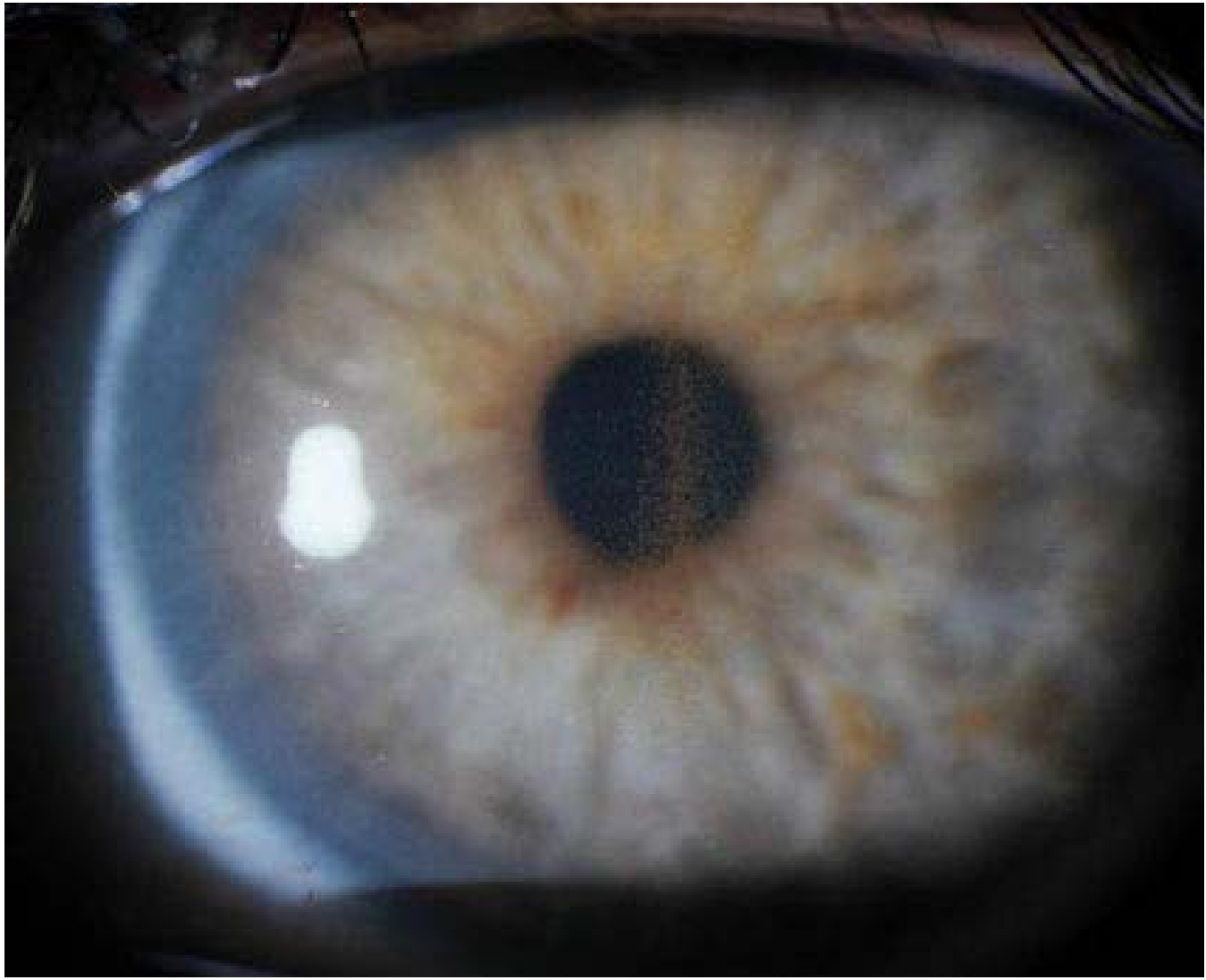
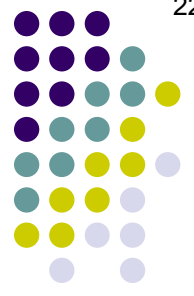


PDS: 'Radial'

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle --common?	Less common	Very common
<p>What is a Krukenberg spindle? A vertical distribution of pigment on the endothelial surface of the cornea</p>		



Krukenberg spindle

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle --common?	Less common	Very common
What is a Krukenberg spindle?		
A vertical distribution of pigment on the endothelial surface of the cornea		
What is the source of this pigment?		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle --common?	Less common	Very common
What is a Krukenberg spindle?		
A vertical distribution of pigment on the endothelial surface of the cornea		
What is the source of this pigment?		
It is liberated from the posterior aspect of the iris by the rubbing of the zonules		

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle --common?	Less common	Very common
What is a Krukenberg spindle?		
A vertical distribution of pigment on the endothelial surface of the cornea		
What is the source of this pigment?		
It is liberated from the posterior aspect of the iris by the rubbing of the zonules		
What factors account for the location and shape of the K spindle?		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle --common?	Less common	Very common
What is a Krukenberg spindle?	A vertical distribution of pigment on the endothelial surface of the cornea	
What is the source of this pigment?	It is liberated from the posterior aspect of the iris by the rubbing of the zonules	
What factors account for the location and shape of the K spindle?	Convection currents within the anterior chamber funnel pigment into this area	

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle -- common	Is Krukenberg spindle pathognomonic for PDS and/or PXS?	
What is a Krukenberg spindle?	A vertical distribution of pigment on the endothelial surface of the cornea	
What is the source of this pigment?	It is liberated from the posterior aspect of the iris by the rubbing of the zonules	
What factors account for the location and shape of the K spindle?	Convection currents within the anterior chamber funnel pigment into this area	

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle	<p><i>Is Krukenberg spindle pathognomonic for PDS and/or PXS?</i> No, it can occur in any ocular condition in which pigment is liberated within the anterior segment of the eye (eg, uveitis)</p>	
<p><i>What is a Krukenberg spindle?</i> A vertical distribution of pigment on the endothelial surface of the cornea</p>		
<p><i>What is the source of this pigment?</i> It is liberated from the posterior aspect of the iris by the rubbing of the zonules</p>		
<p><i>What factors account for the location and shape of the K spindle?</i> Convection currents within the anterior chamber funnel pigment into this area</p>		

Q

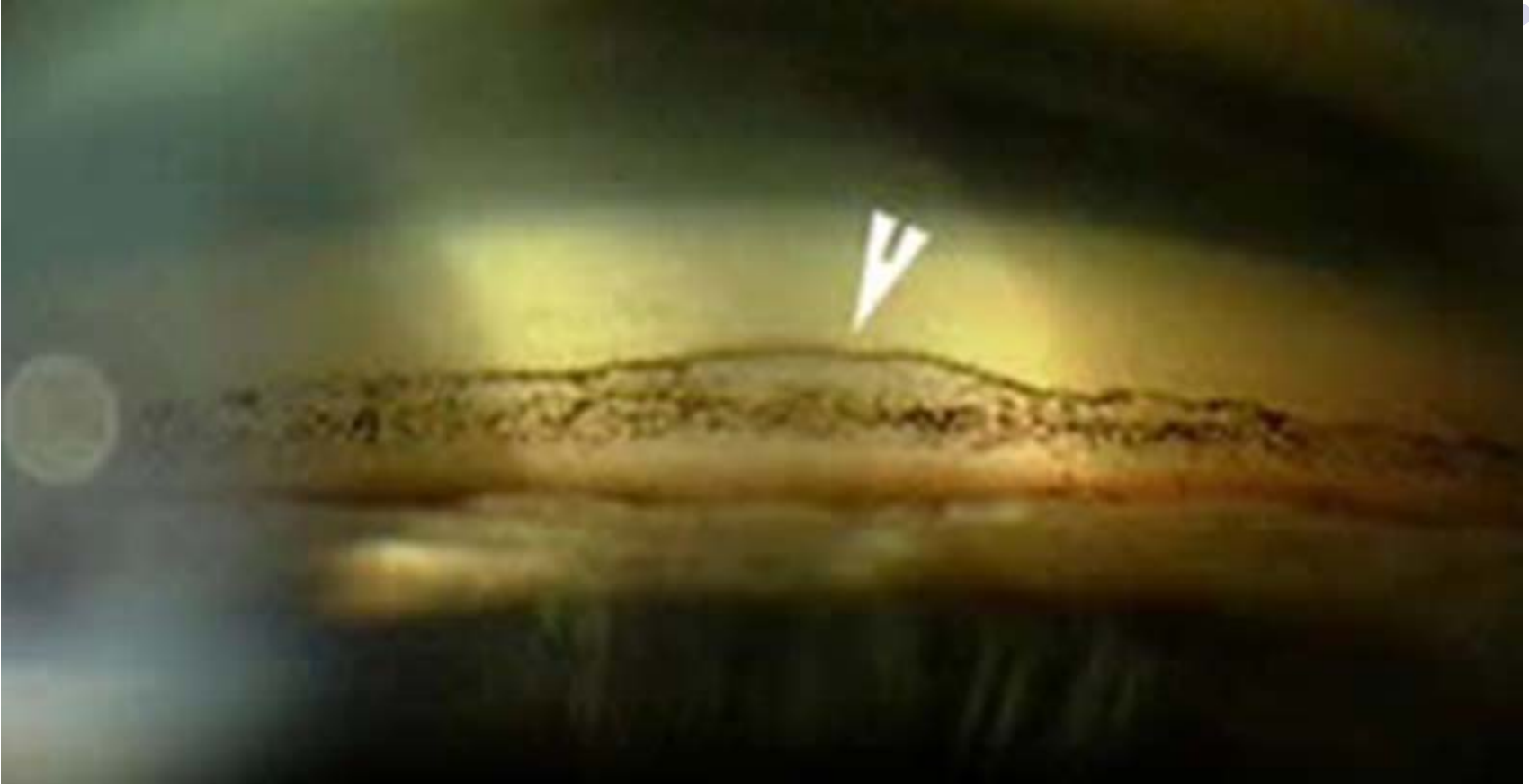
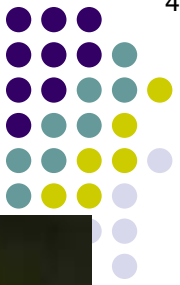
*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle--common?	Less common	Very common
Sampaolesi line --common?	Very common	Less common
What is a Sampaolesi line?		

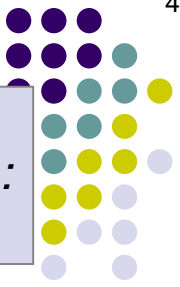
A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle--common?	Less common	Very common
Sampaolesi line --common?	Very common	Less common
<p><i>What is a Sampaolesi line?</i> A scalloped line of pigment present anterior (ie, 'above' on gonioscopy) to Schwalbe's line in the angle. It may seem counterintuitive that a pigment-related exam finding would be more common in PXS and less in PDS/PG (it certainly does to me), but that's the way it is. Be sure to make a mental note of this!</p>		



Sampaolesi line



Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50 usually >70	20s - 40s
Sex predilection		F
Angle status		open
Iris transilluminates when		normal
Krukenberg spindle		common
Sampaolesi line		common

In addition to the cornea's endothelial surface (K spindle) and the angle (Sampaolesi line), in what other anterior-segment location is pigment known to accumulate in PDS/PG?

Krukenberg spindle

Sampaolesi line



Pseudoexfoliation Syndrome (PXS) vs Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG): Fill in the blanks

	PXS	PDS/PG
Age	Rare <50 usually >70	20s - 40s
Sex predilection		F
Angle status		open
Iris transilluminates when viewed from behind		normal
Krukenberg spindle--common		common
Sampaolesi line--common		common

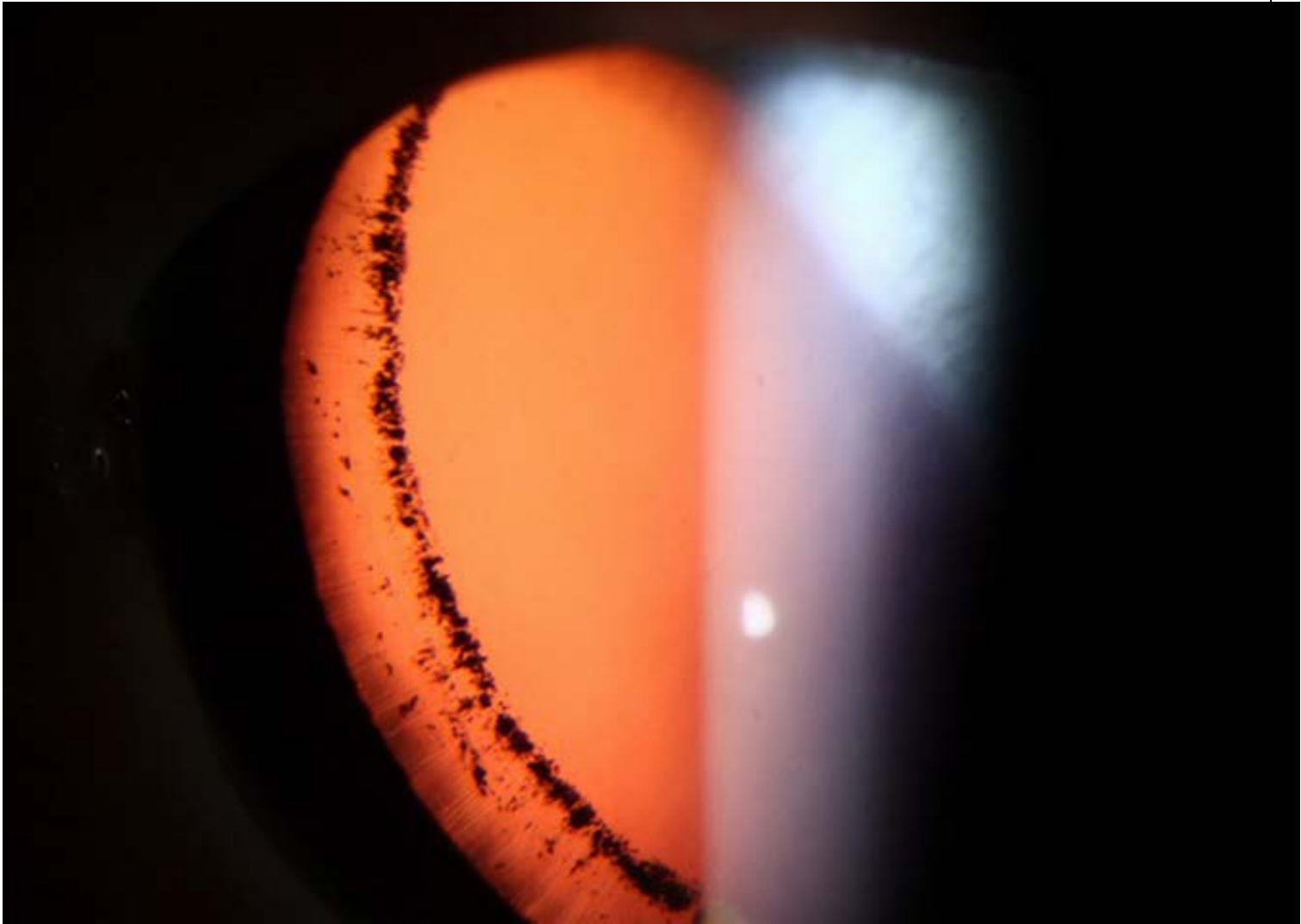
In addition to the cornea's endothelial surface (K spindle) and the angle (Sampaolesi line), in what other anterior-segment location is pigment known to accumulate in PDS/PG?

The area of zonular insertion on the posterior aspect of the lens capsule

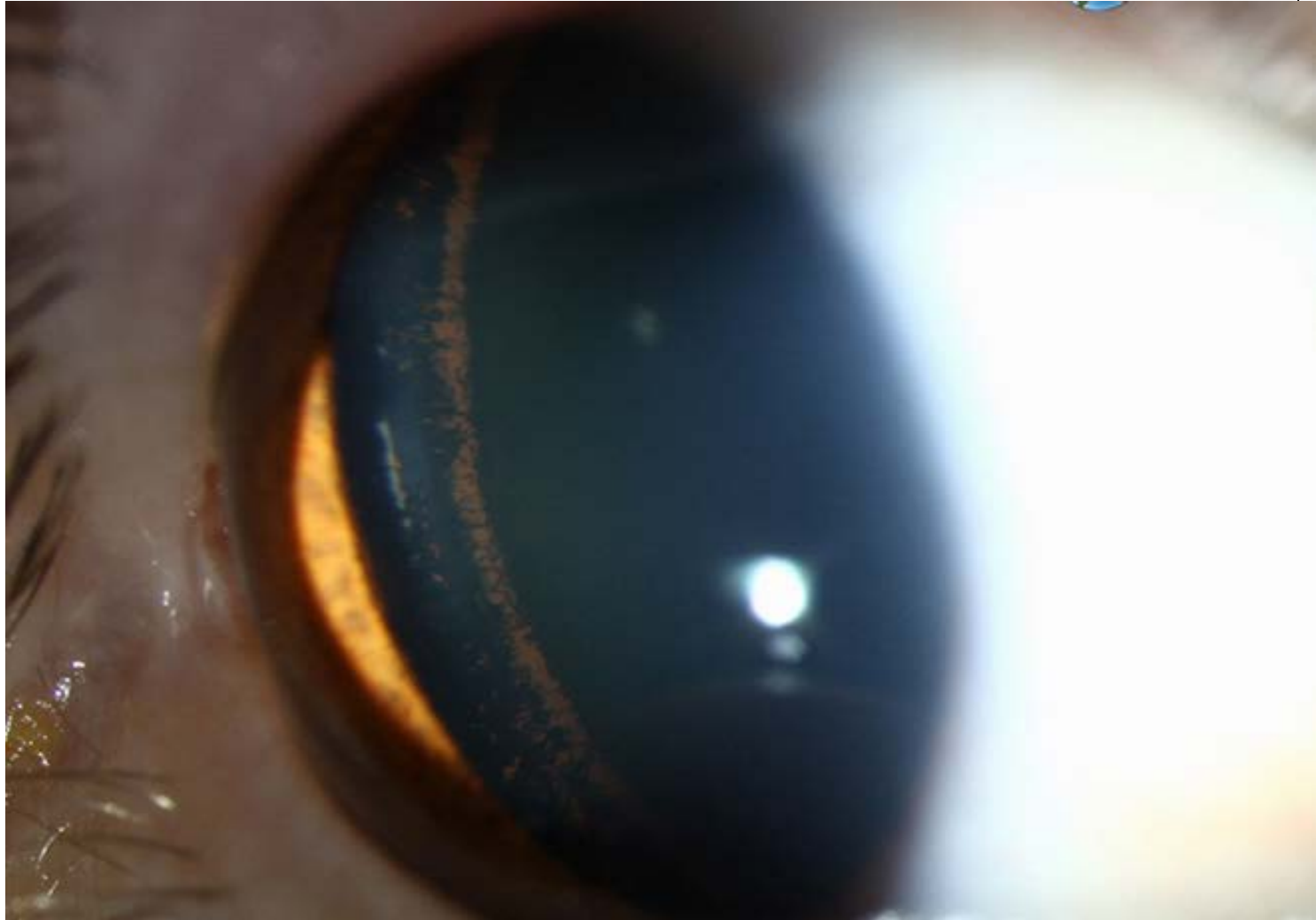
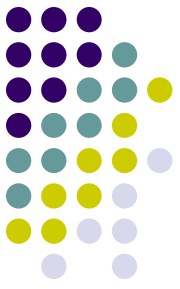
By what eponymous names is this sign known?

Scheie stripe or Zentmayer line

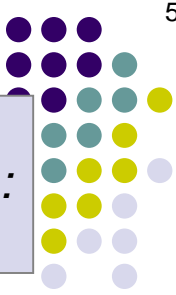
*(Note: For some reason, the BCSC Glaucoma book prefers the much-less-commonly-used term **Zentmayer line** for this finding. So make sure to know **both** names!)*



Scheie stripe



Scheie stripe



Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50 usually >70	20s - 40s
Sex predilection	<p><i>In addition to the cornea's endothelial surface (K spindle) and the angle (Sampaolesi line), in what other anterior-segment location is pigment known to accumulate in PDS/PG?</i></p> <p>The area of zonular insertion on the posterior aspect of the lens capsule</p> <p><i>By what eponymous names is this sign known?</i></p> <p>Scheie stripe or Zentmayer line</p> <p><i>Is this finding pathognomonic for PDS/PG?</i></p>	F
Angle status		open
Iris transilluminates where?		lial
Krukenberg spindle--common?		common
Sampaolesi line--common?		common

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50 usually >70	20s - 40s
Sex predilection	In addition to the cornea's endothelial surface (K spindle) and the angle (Sampaolesi line), in what other anterior-segment location is pigment known to accumulate in PDS/PG?	F
Angle status	The area of zonular insertion on the posterior aspect of the lens capsule	open
Iris transilluminates where?	By what eponymous names is this sign known?	ial
Krukenberg spindle--common?	Scheie stripe or Zentmayer line	common
Sampaolesi line--common?	Is this finding pathognomonic for PDS/PG?	common
	Yes	
	Does Scheie's stripe fade with time like the K spindle and Sampaolesi line?	

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50 usually >70	20s - 40s
Sex predilection	In addition to the cornea's endothelial surface (K spindle) and the angle (Sampaolesi line), in what other anterior-segment location is pigment known to accumulate in PDS/PG?	F
Angle status	The area of zonular insertion on the posterior aspect of the lens capsule	open
Iris transilluminates where?	By what eponymous names is this sign known?	ial
Krukenberg spindle--common?	Scheie stripe or Zentmayer line	common
Sampaolesi line--common?	Is this finding pathognomonic for PDS/PG?	common
	Yes	
	Does Scheie's stripe fade with time like the K spindle and Sampaolesi line?	
	No (a fact that increases its value as an exam finding)	

Q

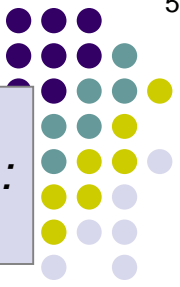
*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i></p>	
Iris transilluminates when		
Krukenberg spindle -- cor		
Sampaolesi line -- cor in		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS? The presence of fibrillar material on the anterior lens capsule</i></p>	
Iris transilluminates when		
Krukenberg spindle		
Sampaolesi line		



Q

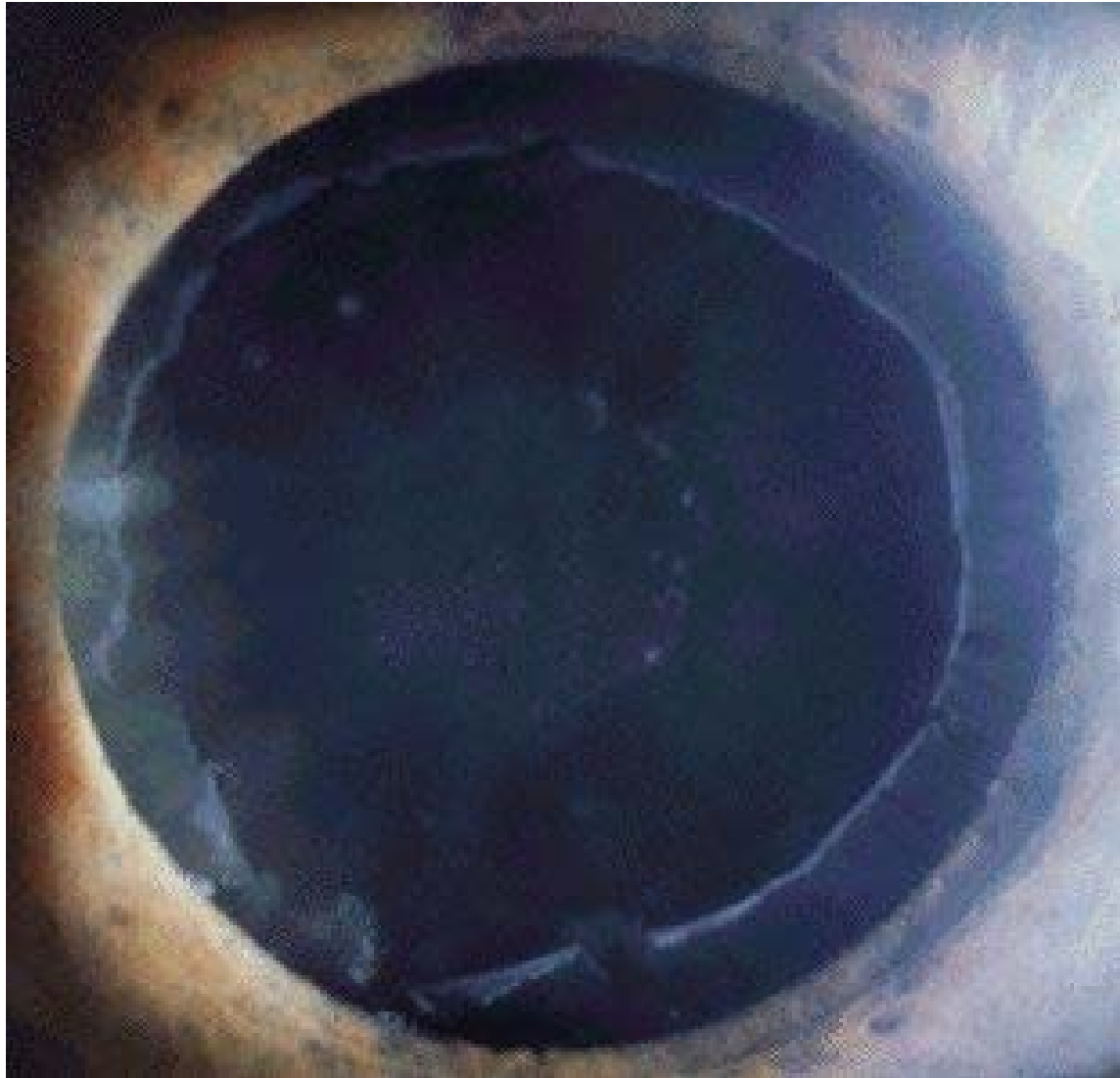
*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i></p> <p>The presence of fibrillar material on the anterior lens capsule</p> <p><i>What sort of pattern does this material form on the capsule?</i></p>	
Iris transilluminates when		
Krukenberg spindle		
Sampaolesi line		

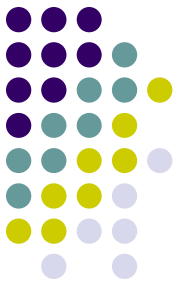
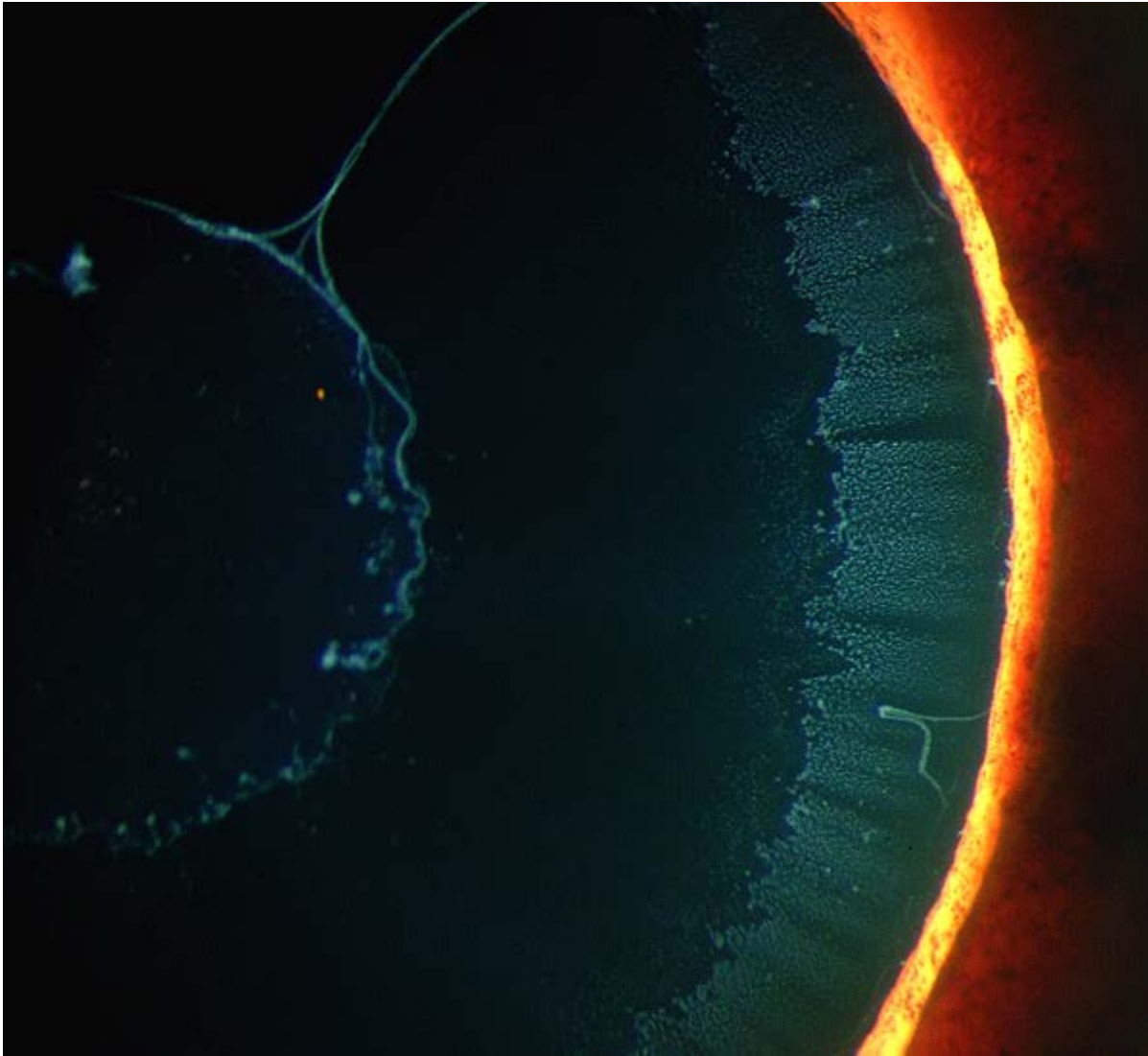
A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i></p> <p>The presence of fibrillar material on the anterior lens capsule</p> <p><i>What sort of pattern does this material form on the capsule?</i></p> <p>'Target-like'</p>	
Iris transilluminates when		
Krukenberg spindle		
Sampaolesi line		



PXS: Fibrillar material on anterior lens capsule



PXS: Fibrillar material on anterior lens capsule

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i></p> <p>The presence of fibrillar material on the anterior lens capsule</p> <p><i>What sort of pattern does this material form on the capsule?</i></p> <p>'Target-like'</p> <p><i>What accounts for the target-like distribution of the material?</i></p>	
<i>Iris transilluminates when</i>		
Krukenberg spindle		
Sampaolesi line		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i>	
Iris transilluminates when	The presence of fibrillar material on the anterior lens capsule	
Krukenberg spindle	<i>What sort of pattern does this material form on the capsule?</i>	
Sampaolesi line	'Target-like'	
	<i>What accounts for the target-like distribution of the material?</i>	
	The movement of the iris across the capsule as the pupil dilates and constricts	

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?	
Iris transilluminates when	The presence of fibrillar material on the anterior lens capsule	
Krukenberg spindle	Is this material limited to the anterior lens surface?	
Sampaolesi line		
	What accounts for the target-like distribution of the material?	
	The movement of the iris across the capsule as the pupil dilates and constricts	

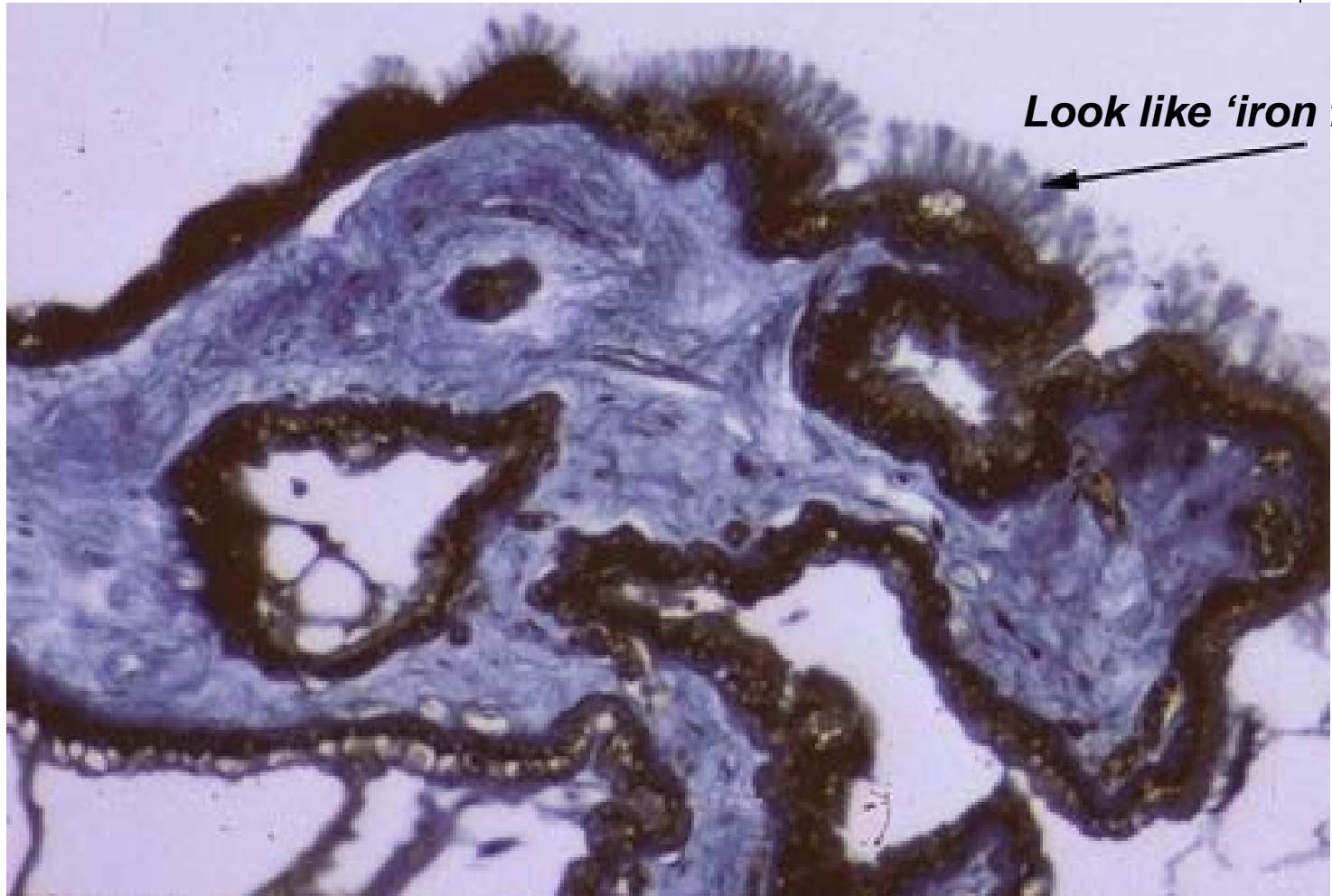
A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	<p><i>In addition to the cornea K spindle and Sampaolesi line, what other anterior-segment finding is an even more prominent characteristic of PXS?</i></p> <p>The presence of fibrillar material on the anterior lens capsule</p> <p><i>Is this material limited to the anterior lens surface?</i></p> <p>No, it can be found throughout both the anterior and posterior chambers</p> <p><i>What accounts for the target-like distribution of the material?</i></p> <p>The movement of the iris across the capsule as the pupil dilates and constricts</p>	
<i>Iris transilluminates when</i>		
Krukenberg spindle		
Sampaolesi line		



PXS: Fibrillar material on posterior iris, and ciliary processes



PXS: Fibrillar material on ciliary processes (high mag)

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20s – 40s
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>What does this mean, PXS is a systemic disorder?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20s – 40s
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
	<i>What does this mean, PXS is a systemic disorder?</i>	
	The same fibrillar material found in the anterior chamber is found in distant organs	

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20s – 40s
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
	<p><i>What does this mean, PXS is a systemic disorder?</i></p> <p>The same fibrillar material found in the anterior chamber is found in distant organs</p> <p><i>What sort of material is the fibrillar material?</i></p>	

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20s – 40s
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
	<i>What does this mean, PXS is a systemic disorder?</i>	
	The same fibrillar material found in the anterior chamber is found in distant organs	
	<i>What sort of material is the fibrillar material?</i>	
	It is composed of connective tissues, mainly elastin and collagen	

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20 – 50
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle--common?	Less common	Very common
Sampaolesi line--common?	Very common	Less common
Systemic disorder?	Yes	No
↑ risk complications during CE?	Yes	No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the **adj. form** weakness associated with this condition. Weakened **noun form** are not a feature of PDS.

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?*

↑ risk complications during CE?	Yes	No
---------------------------------	-----	----

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

↑ risk complications during CE?	Yes	No
---------------------------------	-----	----

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

↑ risk complications during CE?	Yes	No
---------------------------------	-----	----

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

↑ risk complications during CE?	Yes	No
---------------------------------	-----	----

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

↑ risk complications during CE?

Yes

No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

PXS corneas tend to have more intra- and post-op edema

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

↑ risk complications during CE?

Yes

No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

PXS corneas tend to have more intra- and post-op edema

Why?

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

<i>↑ risk complications during CE?</i>	Yes	No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

PXS corneas tend to have more intra- and post-op edema

Why?

Again, blame the fibrillar material--its presence on the corneal endothelium compromises pump function

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?
PXS eyes tend to dilate poorly*

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

<i>↑ risk complications during CE?</i>	Yes	No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

PXS corneas tend to have more intra- and post-op edema

Why?

Again, blame the fibrillar material--its presence on the corneal endothelium compromises pump function

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?*
PXS eyes tend to dilate poorly

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

↑ risk complications during CE?

Yes

No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

*Final question on this: What **long-term** serious complication are s/p CE PXS eyes subject to?*

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

*In addition to complications owing to zonule and iris issues, what **cornea-related** complication are PXS pts susceptible to?*

PXS corneas tend to have more intra- and post-op edema

Why?

Again, blame the fibrillar material--its presence on the corneal endothelium compromises pump function

*In addition to complications owing to zonular weakness, what **iris-related** issue renders CE in PXS trickier?*
PXS eyes tend to dilate poorly

Why do they dilate poorly?

The presence of the fibrillar material within the dilator muscle (and its blood vessels) compromises dilation

↑ risk complications during CE?

Yes

No

One important cause of increased risk of intraoperative complications during CE surgery in PXS is due to the zonular weakness associated with this condition. Weakened zonules are not a feature of PDS.

*Final question on this: What **long-term serious complication** are s/p CE PXS eyes subject to?*

Spontaneous dislocation of the IOL/bag complex into the vitreous cavity

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

What is the etiology of pain in PDS?

		PDS/PG
		20s – 40s
		M>F
		Wide open
		Radial
		Very common
		Less common
		No
		No
<i>Complain of eye pain?</i>	No	Frequently

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

		PDS/PG
		20s – 40s
		M>F
		Wide open
		Radial
		Very common
		Less common
		No
		No
Complain of eye pain?	No	Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently



Q/A

Pseudoexfoliation Syndrome (PXS) vs Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG): Fill in the blanks

What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while , or after an event

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

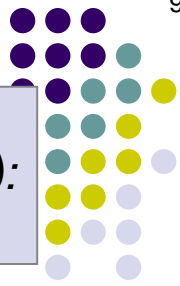
No

Frequently

Complain of eye pain?	No	Frequently

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

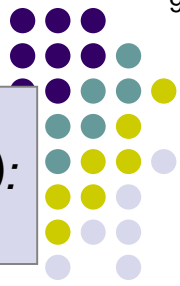
Complain of eye pain?

No

Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently

Complain of eye pain?	No	Frequently

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

The stressful event leads to a surge in sympathetic innervation, which in turn prompts a brisk dilation of the pupil

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

The stressful event leads to a surge in sympathetic innervation, which in turn prompts a brisk dilation of the pupil

In the classic scenarios, is the pain accompanied by other symptoms?

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently

<i>Complain of eye pain?</i>	No	Frequently

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

The stressful event leads to a surge in sympathetic innervation, which in turn prompts a brisk dilation of the pupil

In the classic scenarios, is the pain accompanied by other symptoms?

Yes--decreased VA and/or haloes around lights

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

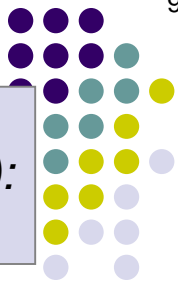
Complain of eye pain?

No

Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

The stressful event leads to a surge in sympathetic innervation, which in turn prompts a brisk dilation of the pupil

In the classic scenarios, is the pain accompanied by other symptoms?

Yes--decreased VA and/or haloes around lights

What is the mechanism for these visual disturbances?

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*



What is the etiology of pain in PDS?

It is believed to be secondary to an IOP spike after a sudden and substantial release of pigment

In what sorts of situations might one expect a sudden and substantial release of pigment?

The classic story is of a young adult male who experiences sudden-onset but transient eye pain while exercising, or after an emotional event

Why would such situations be expected to produce pigment release?

The stressful event leads to a surge in sympathetic innervation, which in turn prompts a brisk dilation of the pupil

In the classic scenarios, is the pain accompanied by other symptoms?

Yes--decreased VA and/or haloes around lights

What is the mechanism for these visual disturbances?

Corneal edema secondary to the sudden and dramatic IOP spike

PDS/PG

20s – 40s

M>F

Wide open

Radial

Very common

Less common

No

No

Complain of eye pain?

No

Frequently

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>		

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>Age</i>	Rare <50, usually >70	20 – 50
<i>Sex predilection</i>	F>M	M>F
<i>Angle status</i>	Narrow	Wide open
<i>Iris transilluminates where?</i>	Margin	Radial
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>	None	Myopia

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle--common?	Less common	Very common
Sampaolesi line--common?	Very common	Less common
Systemic disorder?	Yes	No
↑ risk complications during CE?	Yes	No
Complain of eye pain?	No	Frequently
↑ inflammation after CE?		
↑ risk of cataract?		
Typical refractive status?	None	Myopia

Do PDS patients tend to be low myopes or high myopes?

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F
Angle status	Narrow	Wide open
Iris transilluminates where?	Margin	Radial
Krukenberg spindle--common?	Less common	Very common
Sampaolesi line--common?	Very common	Less common
Systemic disorder?	Yes	No
↑ risk complications during CE?	Yes	No
Complain of eye pain?	No	Frequently
↑ inflammation after CE?		
↑ risk of cataract?		
Typical refractive status?	None	Myopia

*Do PDS patients tend to be low myopes or high myopes?
High myopes*

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
Age	Rare <50, usually >70	20s – 40s
Sex predilection	F>M	M>F

So here's what you're looking for on an exam:

PXS: An elderly white female with cataract, marginal iris TID, and elevated IOP. Be sure to recognize the fact that her cataract surgery is likely to be complicated owing to her compromised zonules.

PDS: A young myopic male with radial TID who complains about pain/haloes associated with exercise.

Complain of eye pain?	No	Frequently
↑ inflammation after CE?	Yes	No
↑ risk of cataract?	Yes	No
Typical refractive status?	None	Myopia

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>What percent of PXS pts develop elevated IOP?</i>		
<i>Iris</i>		
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>	None	Myopia

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>What percent of PXS pts develop elevated IOP?</i>		
<i>~25%</i>		
<i>Iris</i>		
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>	None	Myopia

Q

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>What percent of PXS pts develop elevated IOP?</i>		
<i>~25%</i>		
<i>What percent of PXS pts with elevated IOP develop glaucoma?</i>		
<i>Iris</i>		
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>	None	Myopia

A

*Pseudoexfoliation Syndrome (PXS) vs
Pigmentary Dispersion Syndrome/Pigmentary Glaucoma (PDS/PG):
Fill in the blanks*

	PXS	PDS/PG
<i>What percent of PXS pts develop elevated IOP?</i>		s
<i>~25%</i>		
<i>What percent of PXS pts with elevated IOP develop glaucoma?</i>		en
<i>Iris ~33%, which means that $.33 \times .25 \approx 8\%$ of PXS pts develop glaucoma</i>		
<i>Krukenberg spindle--common?</i>	Less common	Very common
<i>Sampaolesi line--common?</i>	Very common	Less common
<i>Systemic disorder?</i>	Yes	No
<i>↑ risk complications during CE?</i>	Yes	No
<i>Complain of eye pain?</i>	No	Frequently
<i>↑ inflammation after CE?</i>	Yes	No
<i>↑ risk of cataract?</i>	Yes	No
<i>Typical refractive status?</i>	None	Myopia

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?

A



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?

Posner-Schlossman syndrome

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings		

A



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings		

A



*The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it? **Posner-Schlossman syndrome**. So let's compare/contrast them:*

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings		

A



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings	May have 'KP'	Heavy TM pigment; +/- Sampaolesi line

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings	May have 'KP'	Heavy TM pigment; +/- Sampaolesi line
Iris findings		

A



*The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it? **Posner-Schlossman syndrome**. So let's compare/contrast them:*

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings	May have 'KP'	Heavy TM pigment; +/- Sampaolesi line
Iris findings	None	Radial TID; concave bowing

Q



The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it?
Posner-Schlossman syndrome. So let's compare/contrast them:

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings	May have 'KP'	Heavy TM pigment; +/- Sampaolesi line
Iris findings	None	Radial TID; concave bowing
Lens findings		

A



*The scenario of a young adult with episodic unilateral pain, blurred vision and haloes, and significantly elevated IOP should bring to mind another condition--what is it? **Posner-Schlossman syndrome**. So let's compare/contrast them:*

Characteristics	Posner-Schlossman	Pigment Dispersion
Gender predilection	None	Male
Refractive status	No tendency	Myopic
Precipitating factors	None	Exercise; emotional event
Endothelial findings	KP	Krukenberg spindle
AC findings	Cell	Pigment
Gonioscopic findings	May have 'KP'	Heavy TM pigment; +/- Sampaolesi line
Iris findings	None	Radial TID; concave bowing
Lens findings	None	Scheie stripe (Zentmayer line)

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1

What percentage of open-angle glaucoma worldwide is accounted for by PXS?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1

*What percentage of open-angle glaucoma worldwide is accounted for by PXS?
~10, maybe a little higher*

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

How common is PXS among Scandinavians with glaucoma?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

How common is PXS among Scandinavians with glaucoma?

It is estimated that over **50%** of all OAG cases among Scandinavians are PXS

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

--

--

--

--

--(there are others)

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

- Japanese
- Arabian
- Mediterranean
- South African blacks
- (there are others)

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

--Japanese

--Arabian

--Mediterranean

--**South African blacks**

--(there are others)

What about African-Americans? is it common among them?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

--Japanese

--Arabian

--Mediterranean

--**South African blacks**

--(there are others)

What about African-Americans? is it common among them?

No

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

- Japanese
- Arabian
- Mediterranean
- South African blacks
- (there are others)**

There is a people, indigenous to North America, in whom there has never been a single reported case of PXS. Who are they?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

- Japanese
- Arabian
- Mediterranean
- South African blacks
- (there are others)**

There is a people, indigenous to North America, in whom there has never been a single reported case of PXS. Who are they?
The Inuit

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

- Japanese
- Arabian
- Mediterranean
- South African blacks
- (there are others)**

There is a people, indigenous to North America, in whom there has never been a single reported case of PXS. Who are they?

The Inuit

What sort of glaucoma are the Inuit highly predisposed to develop?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*

In which non-Scandinavian populations does PXS account for a significant proportion of the glaucoma burden?

- Japanese
- Arabian
- Mediterranean
- South African blacks
- (there are others)**

There is a people, indigenous to North America, in whom there has never been a single reported case of PXS. Who are they?

The Inuit

What sort of glaucoma are the Inuit highly predisposed to develop?

Primary angle-closure glaucoma

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT?

(LT = laser trabeculoplasty; ie, ALT and/or SLT)

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? ***Scandinavians***
- Do PXS and PG respond to LT? ***Yes, but the response is short-lived***
- Which has a better prognosis: POAG or PXS? ***POAG***

QA

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a **better prognosis: POAG** or PXS? *POAG*

Is this because IOP tends to be higher in PXS?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a **better prognosis: POAG** or PXS? *POAG*

Is this because IOP tends to be higher in PXS?

No--PXS has a higher risk of progression **even at the same IOP**

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? ***Scandinavians***
- Do PXS and PG respond to LT? ***Yes, but the response is short-lived***
- Which has a better prognosis: POAG or PXS? ***POAG***
- Does CE alleviate PXS?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? ***Scandinavians***
- Do PXS and PG respond to LT? ***Yes, but the response is short-lived***
- Which has a better prognosis: POAG or PXS? ***POAG***
- Does CE alleviate PXS? ***No***

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? **Scandinavians**
- Do PXS and PG respond to LT? **Yes, but the response is short-lived**
- Which has a better prognosis: POAG or PXS? **POAG**
- Does CE alleviate PXS? **No**
- Despite its wide-open angle, PDS/PG is often treated with LPI--why?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*
- Despite its wide-open angle, PDS/PG is often treated with LPI--why? *The iris bows backwards in PDS, causing the iris-zonule touch that liberates the pigment which clogs the TM (and causing the characteristic radial iris transillumination defects). LPI allows the iris to move forward, thereby decreasing touch and subsequent pigment release.*

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*
- Despite its wide-open angle, PDS/PG is often treated with LPI--why? *The iris bows backwards in PDS, causing the iris-zonule touch that liberates the pigment which clogs the TM (and causing the characteristic radial iris transillumination defects). LPI allows the iris to move forward, thereby decreasing touch and subsequent pigment release.*
- Recent research has linked a specific gene to the development of PXS--what is it?

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? **#1**
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*
- Despite its wide-open angle, PDS/PG is often treated with LPI--why? *The iris bows backwards in PDS, causing the iris-zonule touch that liberates the pigment which clogs the TM (and causing the characteristic radial iris transillumination defects). LPI allows the iris to move forward, thereby decreasing touch and subsequent pigment release.*
- Recent research has linked a specific gene to the development of PXS--what is it? *LOXL1*

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

• *What does the LOXL1 gene code for?*

ated with LPI--why?

zonule touch that

using the

LPI allows the iris to

sequent pigment

• Recent research has linked a specific gene to the development of

PXS--what is it? **LOXL1**

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

- *What does the LOXL1 gene code for?*
An enzyme called **lysyl oxidase**

- Recent research has linked a specific gene to the development of PXS--what is it? **LOXL1**

ated with LPI--why?
zonule touch that
using the
LPI allows the iris to
sequent pigment

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

• *What does the LOXL1 gene code for?*

An enzyme called **lysyl oxidase**

In general terms, with what process is lysyl oxidase involved?

ated with LPI--why?

zonule touch that

using the

LPI allows the iris to

sequent pigment

• Recent research has linked a specific gene to the development of

PXS--what is it? **LOXL1**

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

• *What does the LOXL1 gene code for?*

An enzyme called **lysyl oxidase**

In general terms, with what process is lysyl oxidase involved?

Connective-tissue metabolism

• Recent research has linked a specific gene to the development of PXS--what is it? **LOXL1**

ated with LPI--why?

zonule touch that

using the

LPI allows the iris to

sequent pigment

Q

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

• *What does the LOXL1 gene code for?*

An enzyme called **lysyl oxidase**

In general terms, with what process is lysyl oxidase involved?

Connective-tissue metabolism

Which connective-tissue fiber type is affected in PXS?

• *Recent research has linked a specific gene to the development of PXS--what is it?* **LOXL1**

ated with LPI--why?

zonule touch that

using the

LPI allows the iris to

sequent pigment

development of

A

PXS and PDS/PG: Short answer



- Where does PXS rank as a cause of secondary OAG? #1
- What ethnic group has the highest prevalence of PXS? *Scandinavians*
- Do PXS and PG respond to LT? *Yes, but the response is short-lived*
- Which has a better prognosis: POAG or PXS? *POAG*
- Does CE alleviate PXS? *No*

• *What does the LOXL1 gene code for?*

An enzyme called **lysyl oxidase**

In general terms, with what process is lysyl oxidase involved?

Connective-tissue metabolism

Which connective-tissue fiber type is affected in PXS?

Elastin

• *Recent research has linked a specific gene to the development of PXS--what is it?* **LOXL1**

ated with LPI--why?

zonule touch that

using the

LPI allows the iris to

sequent pigment

development of