

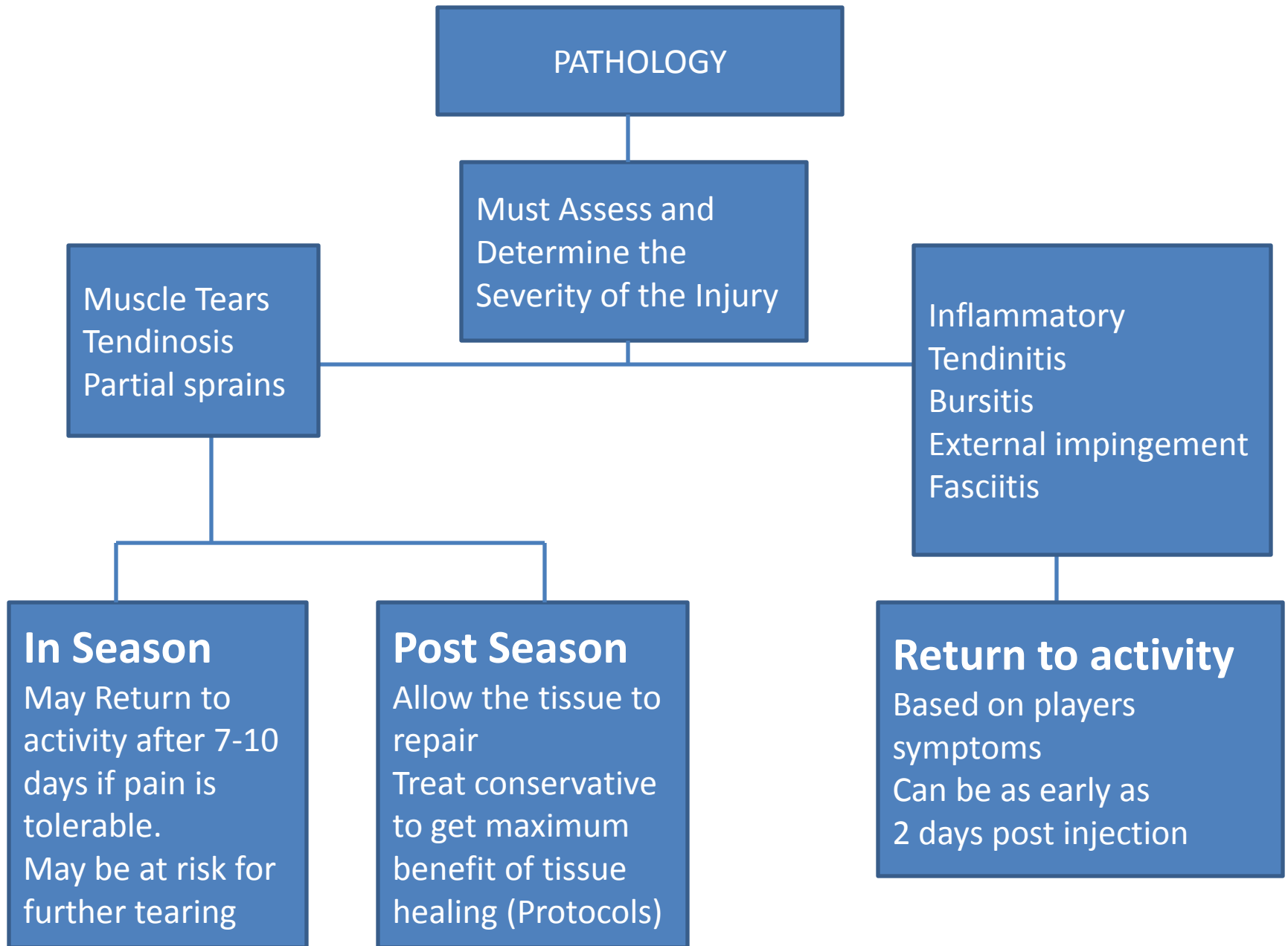


Platelet Rich Plasma - PRP Rehabilitation

Kyle M. Yamashiro, PT, CSCS
CEO RESULTS PHYSICAL THERAPY
Rehab Consultant to the Oakland A's
Organization

PRP Rehabilitation

There is very limited documentation regarding the expected timeframes in regards to tissue healing or rehab protocols regarding post PRP injections.



Type of Tissue

Muscle

Tendon

Ligament

Good



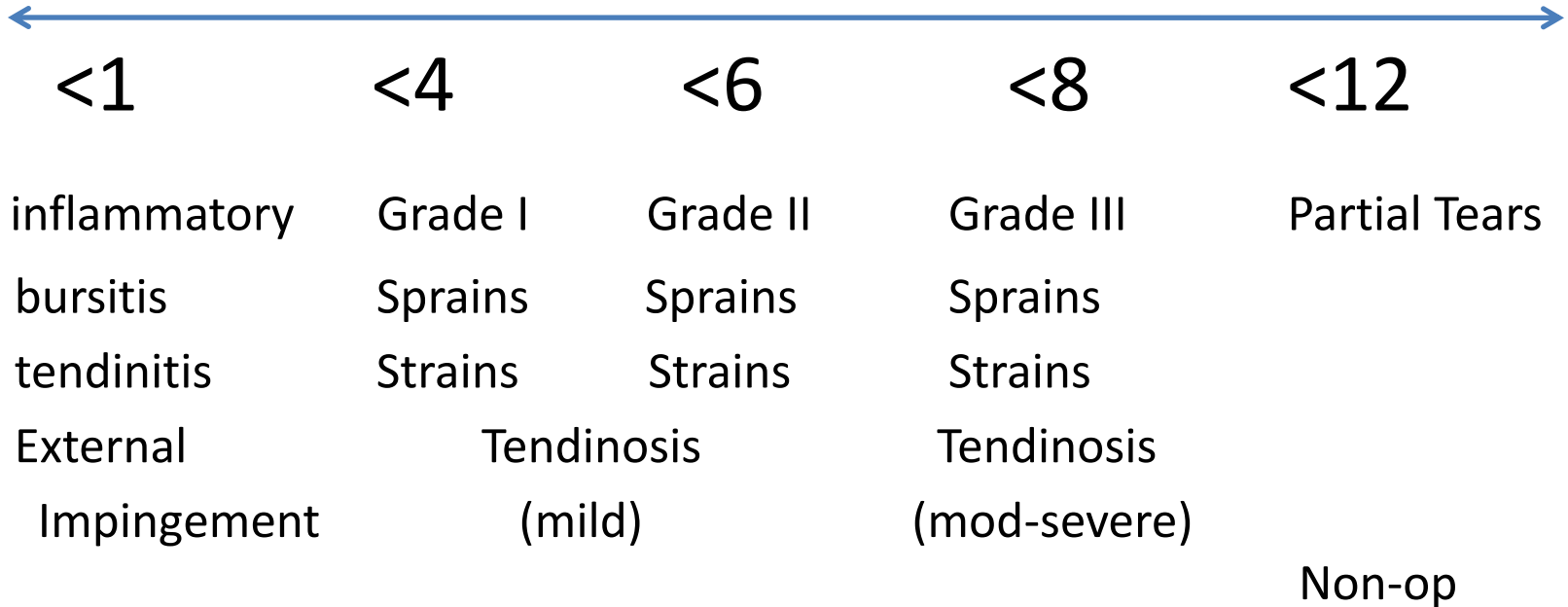
Poor

Blood Supply

TIME LINE

Return to Activity Time line

Weeks



4 stages

Stage I: Post Injection Stage

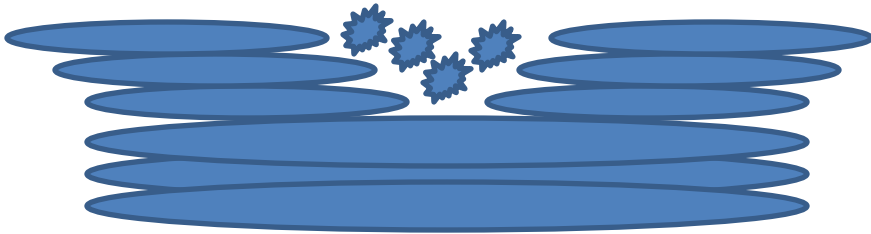
Stage II: Protection

Stage III: Light Activity

Stage IV: Return to Sport Activity

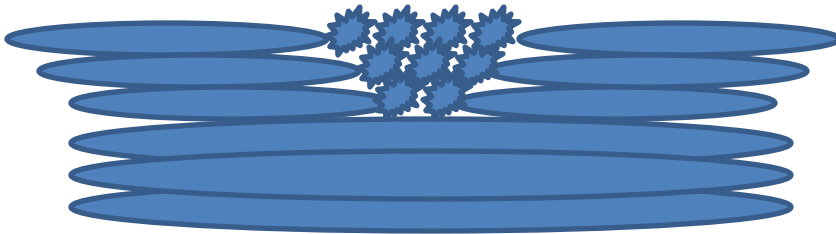
Post injection

- 0-4 days
- Injected PRP
- Commencing the healing process
- Initiation of the cross link
- Allow homeostasis to occur
- Rest 2-3 days
- Depending on our goal we may immobilize the joint



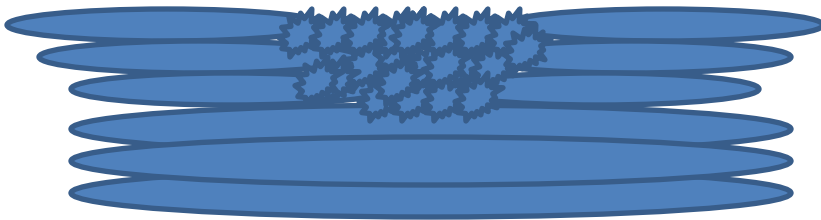
Stage II: Protection Phase

- 7-10 days
- Do not disrupt homeostasis of healing
- Cross link is building a scaffold
- Begin gentle ROM
- Avoid overstretching!!!
- Maintain integrity of the cross link.
- Begin mobilizing tissue so the matrix heals in the lines of fibers.



Stage III: Light Activity Phase

- 2 weeks to 4 weeks
- Gap is filled in
- What is the integrity of the cross link matrix?
- Increasing tensile force of the repaired tissue
- Beginning to withstand load and stretch
- Begin Resistance Training from light to medium
- Active Stretching from gentle to dynamic
- Player's pain symptoms has significantly decreased during this phase.
- Be aware of the type of tissue and severity



6 week Critical Stage

- At this point, the player should have improved significantly with symptoms and function
- Begin to return to baseball activities no earlier than 4 weeks.
- If the player is responding well, then continue with rehab and progressively advance the rehab
- If the player is not responding, then return the player back to the M.D. for further evaluation

Stage IV: Return To Activity

- 4 weeks and on
- Increasing the *tensile structure* of the repaired tissue
- Improving the *tensile load*
ability to generate forces (muscles)
- Improving the *tensile elasticity*
ability to withstand the stretching forces
(Muscles, Tendons and ligaments)

Partial Tears

- Patellar Tendon: Example

Ligaments

- Ligament properties
- UCL ligament

Example: Case Study Scott S

Conclusion

- PRP injections have been beneficial for inflammatory, partial tears, strains, sprains and tendinosis
- Limited Studies on PRP rehabilitation
- Always consider the tissue, and severity of the injury
- Consider the time line of rehabilitating the injury and athlete.

Thank You

Kyle Yamashiro, PT, CSCS

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