

## COMPARISON CHART

VSELs: Very Small Embryonic-Like Stem Cells  
MSCs: Mesenchymal Stem Cells

Cell Adhesion : Capacity of Stem cells to stay on Target Tissue.  
Target Tissue: Tissue expected to be regenerated.

Stem Cell Source/Treatment	SONG Laser Activated Blood Derived VSELs	hUC (human umbilical cord) Derived MSCs	Adipose-Bone Marrow Derived MSCs	Why is this important for you?
<b>General Characteristics</b>				
Average Size of Cells	3-6 Microns	12-30 Microns	12-30 Micron	VSELs possibly cross pulmonary capillaries. MSCs are trapped in the lungs
Pluripotent	Yes	No	No	VSELs possibly cross pulmonary capillaries. MSCs are trapped in the lungs
Multipotent	Yes	Yes	Yes	it can become specific type of tissues (cartilage, tendons, ligaments, bones)
Type of stem cells	Autologous (Your own tissue)	Allogeneic (Someone else's cells)	Autologous (Your own tissue)	Autologous is safer and 100% DNA compatibility
Age of Cell (Quality)	Baby Cells (very high quality)	Baby cells (quality dependent on the lab)	Patient age related	VSELs are always high quality. MSCs are lab quality or age dependent.
Number of replications the Cells can make before senescence (HAYFLICK LIMIT)	Estimated 150 times	40-60 times	< 40 times	Higher HAYFLICK LIMIT = Higher Regeneration Capacity
Need for Expansion to be therapeutical	No	Yes	N/A	hUC MSCs need to be cultured in a lab to grow enough cells to be therapeutical (cost inefficient)
Safety	Safe	Upon lab quality control	Less safe due to invasive procedure	
How they work	By going and regenerating target tissue	By releasing Signaling Molecules from lungs to target tissues	By releasing Signaling Molecules on site	To decide what is the best treatment for your condition
Cost efficient	Yes	No	No	
<b>Special Characteristics</b>				
Crosses Blood Brain Barrier	Possibly	No	No	Longevity and brain related conditions
Due To:	Size of Cell	Size of Cell	Size of Cell	
Guiding Capacity of Cells to Treatment Target Tissue	Yes	No	No	Cells can be signalized to the target location by S.O.N.G. Laser Technology
Due To:	SONG Laser Technology	No Technology Capable	No Technology Capable	
Cell Adhesion Capacity	Very High	Low	Low	For stem cells to become new tissue
Due To:	SONG Laser Technology			
How many cells per treatment	usually 80-120 Millions	usually 100-120 Millions	usually 20-30 Millions	VSELs treatment is lower in count but higher in efficiency
How many days needed for one 100 millions cells treatment	1	3	1	Time efficiency and lower risk of pulmonary embolism
Due To:	Small Size-No risk of embolism	Big Size-Risk of embolism	N/A	
Can produce Teratoma (tumors)	No	No	No	Embrionic Cells (EC) are known to produce teratomas
Risk of Pulmonary Embolism	No	Yes	No	
Can be used in Autoimmune Conditions	Yes	Yes	Preferably no	
<b>Regenerative Impact by Area or condition</b>				
Anti-Aging Effect	High	Low	Very Low	
Due To:	DNA Effects	Indirect Effect	No Effect	
Longevity/Telomere Elongation Effect	Very High	Very low	Very low	

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	Due To: High Telomerase Release	No Effect on Telomeres	No Effect on Tolomere	
Cardiovascular System	Very High	High	Very low	
Autoimmune Conditions	High	Very High	Very low	
Respiratory System Conditions Regeneration	Very High	Very High	Very low	
Brain Trauma Conditions and brain degenerative conditions	Very High	Low	Very low	
Orthopedic/Joints/Cartilage Regeneration	Very High	Very High	Low	
Spinal injury	Very High	Only if intrathecal injection	No	