#### PREVENTION:

## **Thymosin Alpha-1:**

- Is an FDA-approved peptide
- Major component of Thymosin Fraction 5 and is responsible for restoring immune function, particularly cell mediated immune function.
- In Phase III trials for the treatment of hepatitis C and in Phase II trials for hepatitis B.
- Additional possible indications are malignant melanoma, hepatocellular carcinoma, drugresistant tuberculosis, and Di George's syndrome as well as any chronic cancer or viral disease.
- Some physicians are using thymosin for chronic fatigue and Lyme disease as well.
- Thought to modulate the immune system by augmenting T-cell function.
- May affect thymocytes stimulating their differentiation or by converting them to active T cells.
- Rapidly absorbed, achieving peak serum concentrations within two hours. Blood levels return to baseline within 24 hours, and the serum half-life is approximately 2 hours.
- China treated many patients with this prophylactically in 2003.
- Up-regulates glutathione and glutathione directly regulates viral replication.
- Stops immune escape that the virus tries to do (virus down-regulates some of your immune system's defenses).
- Helps turn off cytokine storm, up-regulating IL-10.
- 1st choice for prevention about 20 IU per day / 600 mcg daily.
- Go to 1.5 mg dosing DAILY if around someone who is sick, exposed, etc.
- 1.5 mg BID if in the ICU.

If patients have been on <a href="CJC/lpamorelin">CJC/lpamorelin</a> for a while, they're already up-regulated - especially the glutathione system!

# IF already SICK:

#### **Thymosin Beta-4:**

- IF already IN cytokine storm, add Thymosin Beta-4.
- 300mcg BID is anti-fibrosis.
- 5 mg daily if on ventilator, then down-titrate to 1mg x 2 weeks once off ventilator, and then continue 300mcg bid for 3 months to prevent the fibrosis.

## **GHK-Cu:**

also helps prevent fibrosis - 2mg daily x 1 - 3 months if a patient gets sick

## **BPC-157:**

- is being used prophylactically but in acute setting isn't top choice
- can modulate interleukins and reduce fibrosis