**History of Spinal Muscular Atrophy (SMA)**

1. First discovered in children by scientists Johann Hoffman and Guido Werdnig from Germany and Austria in 1891
2. The symptoms were muscle weakness within the first months of life, and the condition was genetic
3. The feebleness was caused by the loss of particular spinal cord nerve cells called anterior horn cells or motor neurons
4. There are four categories of SMA

**Statistical Information**

1. It occurs in one to two per 100,000 persons but the stats vary with
2. The disease is inherited through an autosomal recessive configuration
3. The onset of the disease determines its severity

**Signs and Symptoms**

1. SMA1: Children have difficulty sucking and swallowing
2. SMA2: Babies are unable to walk
3. SMA3: Recurrent respiratory infections and general muscle weakness
4. SMA4: It does not manifest nor affect the quality of life

**Screening, Diagnosis, and Treatment**

1. Screening: genetic testing, Electromyography (EMG), muscle biopsy, blood test
2. Medications: disease-modifying drugs, Gene replacement therapy, use of support devices

**Use of Pharmacogenomics**

1. The field is utilized extensively in SMA management
2. The gene therapy uses Zolgensma to address the genetic cause of SMA
3. Future research on pharmacogenomics is expected to continue