INTRODUCTION: The innovative therapies for genetic disorders that are being designed by the international scientific community depend on the type of mutation rather than the condition of the patient. This imposed the systematic inclusion of DNA analysis in our newborn screening algorithm. OBJECTIVES: a) To estimate the population incidence, b) To report the allelic frequency found, c) To describe all the mutations present of the different regions of Santa Fe according to regional ethnic group. METHODOLOGY: We analyzed the data of live newborns from the public provincial sector by regional genotyping supplied by the Direction of Statistics of the Health Ministry, and records of newborn screening on genetic disorders from 01/01/2011 to 30/04/2018, period in which the mutation panel method was incorporated and sequentially expanded: 2011 PCR allele specific for p.Phe508del, p.Gly542X and p.Asn1303Lys; in 2013 OLA PCR with 32 mutations; in 2016 InnoLipa with 36 mutations and 2018 Elucigen (ARMS) with 50 mutations. RESULTS: 201,366 newborns were analyzed, 33 patients were diagnosed with cystic fibrosis: incidence: 1/6102. 24 patients (72.7%) presented 2 mutations of those studied, 6 patients (18.2%) 1 alone and, 3 patients (9.1%) did not present any, were diagnosed by the Sweat Test. The allelic frequency of the mutations found were: p.Phe508del: 63.6%, p.Gly85Glu: 6.1%, p.Gly542X: 4.5%, p.Arg1162X: 3.0%, and p.Lys684SerfsX38, p.Asn1303Lys and L49P (de novo mutation): 1.5%. In Rosario Node the mutations found were p.Phe508del, p.Asn1303Lys and p.Gly85Glu; Santa Fe Node: p.Phe508del, p.Gly542X, p.Gly85Glu and p.Arg1162X; Rafaela Node: p.Phe508del and p.Gly542X; VenadoTuerto Node: p.Phe508del; and in Reconquista Node: p.Phe508del, p.Arg1162X, p.Lys684SerfsX38 and L49P. CONCLUSIONS: The severe mutation classes I and II found in the two alleles of each patient studied, determine severe clinical phenotypes and highlight the genetic heterogeneity of the population in Santa Fe, reassuring the need for molecular diagnosis that allows predicting the course of the disease since the pre-symptomatic stage, and establishing early specific medical therapies that prevent irreversible sequels and improve the quality of life and life expectancy of the patients.