RASopathy and Noonan Spectrum Disorders (24 Genes)				
Gene	**Expanded RASopathy Panel**	**Inheritance Pattern**	**Association**	**Syndromes/Clinical Features**
ACTB	X	AD	Strong	Baraitser-Winter syndrome
ACTG1	X	AD	Definitive	Baraitser-Winter syndrome
BRAF	X	AD	Definitive	Cardio-facio-cutaneous (Moderate for Noonan syndrome)
CBL	X	AD	Definitive	Noonan syndrome/Juvenile Myelomonocytic Leukemia
FGD1	X	XLR	Definitive	Aarskog-Scott syndrome/faciodigitogenital syndrome
HRAS	X	AD	Definitive	Costello syndrome
KAT6B	X	AD	Strong	variant
KRAS	X	AD	Definitive	Noonan syndrome (Strong for Cardio-facio-cutaneous)
LZTR1	X	AD	Strong	Noonan syndrome (limited for recessive disease)/schwannomatosis
MAP2K1	X	AD	Definitive	Cardio-facio-cutaneous
MAP2K2	X	AD	Definitive	Cardio-facio-cutaneous
MRAS	X	AD	Limited	Noonan syndrome (w/ hypertrophic cardiomyopathy)
NF1	X	AD	Definitive	Neurofibromatosis 1
NRAS	X	AD	Definitive	Noonan syndrome/Juvenile Myelomonocytic Leukemia
PPP1CB	X	AD	Strong	Noonan syndrome-like disorder with loose anagen hair
PTPN11	X	AD	Definitive	Noonan syndrome/NS with multiple lentigines/Juvenile Myelomonocytic Leukemia/Metachondromatosis
RAF1	X	AD	Definitive	Noonan syndrome (w/ hypertrophic cardiomyopathy)
RASA2	X	AD	Limited	Noonan syndrome
RRAS	X	AD	Limited	Noonan syndrome
RIT1	X	AD	Definitive	Noonan syndrome (w/ hypertrophic cardiomyopathy)
SHOC2	X	AD	Definitive	Noonan syndrome-like disorder with loose anagen hair
SOS1	X	AD	Definitive	Noonan syndrome
SOS2	X	AD	Moderate	Noonan sydrome
SPRED1	X	AD	Definitive	Legius syndrome