VocalWell

VOICE PATHOLOGY MEDICAL REPORT

Patient Information

Analysis Date: 2025-03-16
Predicted Condition: Vocal Polyp (71.54%)

Acoustic Measurements

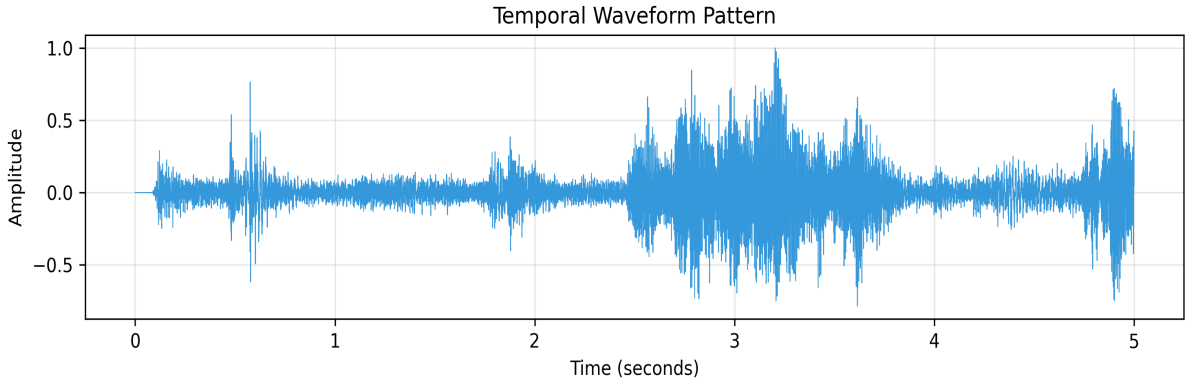
Parameter	Value	Normal Range	Unit
Fundamental Frequency (Mean)	135.57	85-255	Hz
Fundamental Frequency (Std)	44.87	0-20	Hz
Jitter	4.54	0-2.2	%
Shimmer	11.19	0-3.81	%
Harmonic Ratio	0.101	0.15-0.25	
Voice Period	0.0074	0.003-0.005	s
Voiced Segments Ratio	0.38	0.4-0.8	
Formant Frequency	0.00	500-2000	Hz

Detailed Analysis

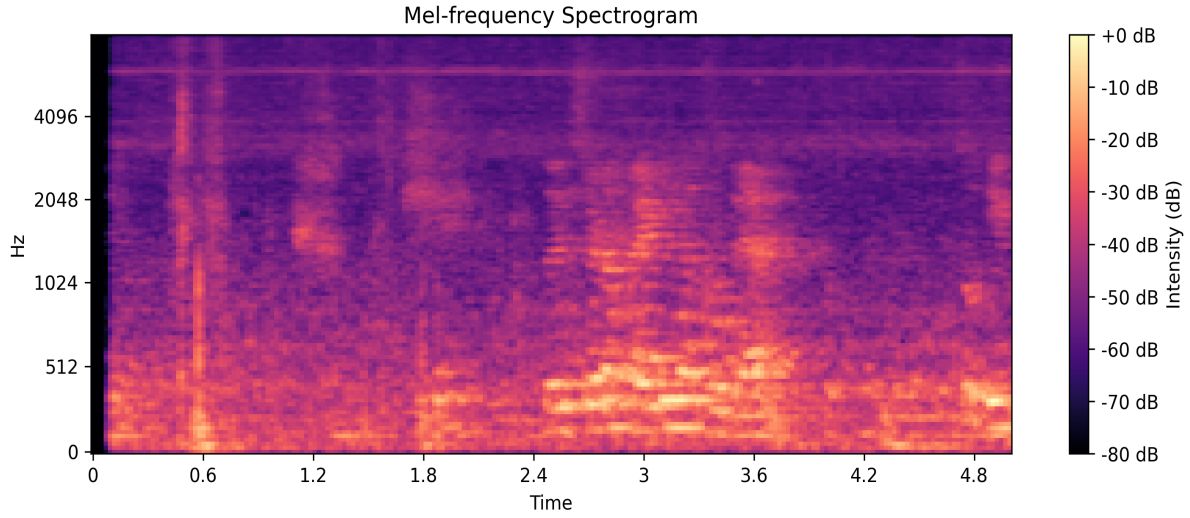
The acoustic and clinical analysis suggests a 71.5% probability of vocal polyp presence. The analysis reveals significant perturbations in voice quality parameters, particularly in frequency and amplitude stability measures. Notable findings include increased jitter and shimmer values, reduced harmonic-to-noise ratio, and irregular fundamental frequency patterns. These characteristics are typical of structural lesions affecting vocal fold vibration.

Voice Analysis Visualizations

1. Voice Waveform

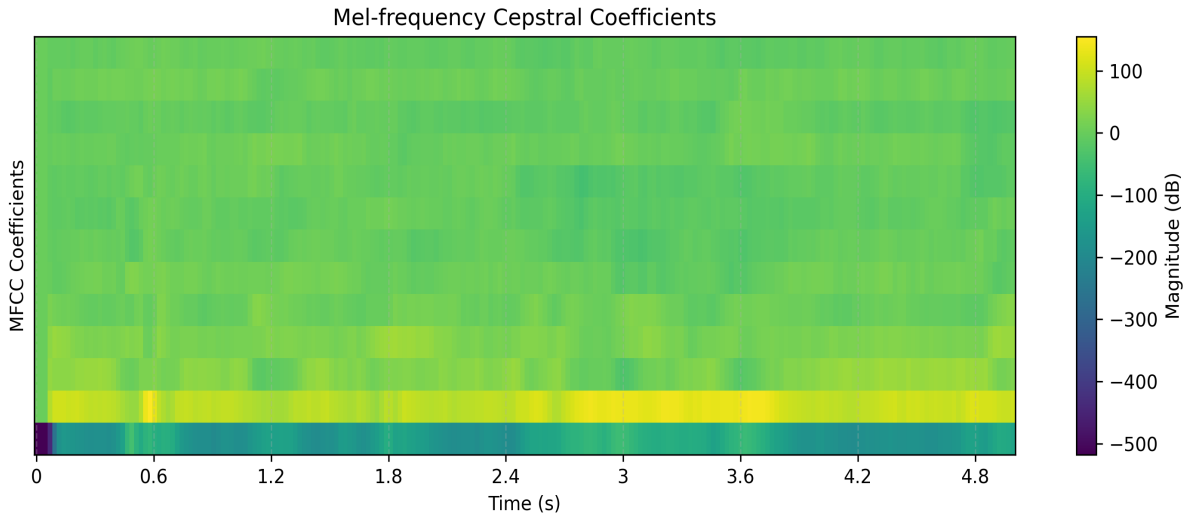


2. Spectral Analysis



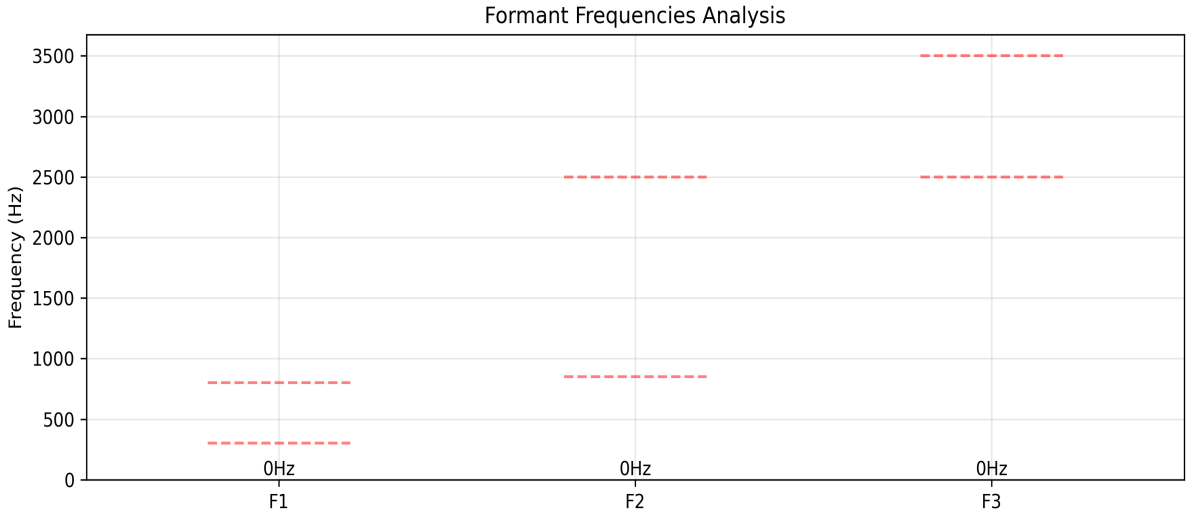
Advanced Voice Analysis

1. MFCC Analysis



MFCC Analysis provides insights into the vocal tract configuration and voice quality: • Coefficients 1-4: Represent overall spectral shape and vocal tract resonances • Coefficients 5-8: Capture detailed spectral variations • Coefficients 9-13: Indicate fine harmonic structure and voice quality

2. Formant Analysis



Formant Analysis Results: • First Formant (F1): 0 Hz - Below normal range • Second Formant (F2): 0 Hz - Below normal range • Third Formant (F3): 0 Hz - Below normal range Interpretation: • F1 relates to vowel height and jaw opening • F2 indicates tongue advancement and retraction • F3 reflects voice quality and resonance characteristics