Suppl 6. Feature names in every radiomics model

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| **AP (20)** | **PP (15)** |
| AP\_log-sigma-3-0-mm-3D\_firstorder\_Skewness | PP\_original\_shape\_Maximum3DDiameter |
| AP\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance | PP\_original\_shape\_Sphericity |
| AP\_log-sigma-5-0-mm-3D\_firstorder\_Skewness | PP\_original\_glszm\_LargeAreaLowGrayLevelEmphasis |
| AP\_wavelet-LLH\_glcm\_Imc2 | PP\_log-sigma-3-0-mm-3D\_firstorder\_Maximum |
| AP\_wavelet-LHL\_firstorder\_90Percentile | PP\_log-sigma-3-0-mm-3D\_gldm\_GrayLevelVariance |
| AP\_wavelet-LHL\_firstorder\_RootMeanSquared | PP\_log-sigma-4-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis |
| AP\_wavelet-LHL\_firstorder\_Skewness | PP\_log-sigma-4-0-mm-3D\_gldm\_SmallDependenceHighGrayLevelEmphasis |
| AP\_wavelet-LHL\_gldm\_LargeDependenceHighGrayLevelEmphasis | PP\_log-sigma-5-0-mm-3D\_glcm\_Idm |
| AP\_wavelet-LHH\_glszm\_SizeZoneNonUniformityNormalized | PP\_wavelet-LLH\_firstorder\_Kurtosis |
| AP\_wavelet-HLL\_firstorder\_Median | PP\_wavelet-HLL\_firstorder\_Kurtosis |
| AP\_wavelet-HLL\_gldm\_LargeDependenceHighGrayLevelEmphasis | PP\_wavelet-HLL\_firstorder\_Maximum |
| AP\_wavelet-HLH\_firstorder\_10Percentile | PP\_wavelet-HLL\_glcm\_ClusterShade |
| AP\_wavelet-HLH\_glcm\_Autocorrelation | PP\_wavelet-HLH\_glrlm\_ShortRunHighGrayLevelEmphasis |
| AP\_wavelet-HLH\_glszm\_HighGrayLevelZoneEmphasis | PP\_wavelet-HHH\_glcm\_ClusterShade |
| AP\_wavelet-HHL\_firstorder\_Mean | PP\_wavelet-LLL\_glcm\_Idm |
| AP\_wavelet-HHL\_firstorder\_Median |  |
| AP\_wavelet-HHL\_gldm\_DependenceVariance |  |
| AP\_wavelet-HHH\_glcm\_InverseVariance |  |
| AP\_wavelet-LLL\_firstorder\_Skewness |  |
| AP\_wavelet-LLL\_glcm\_Autocorrelation |  |
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| **DP (13)** | **DWI (14)** |
| DP\_original\_shape\_Flatness | DWI\_log-sigma-3-0-mm-3D\_firstorder\_Kurtosis |
| DP\_wavelet-LHL\_glcm\_ClusterShade | DWI\_log-sigma-3-0-mm-3D\_glszm\_SmallAreaLowGrayLevelEmphasis |
| DP\_wavelet-LHL\_glcm\_Correlation | DWI\_log-sigma-4-0-mm-3D\_firstorder\_Maximum |
| DP\_wavelet-LHL\_glcm\_DifferenceAverage | DWI\_wavelet-LLH\_glcm\_Idmn |
| DP\_wavelet-LHL\_glszm\_SizeZoneNonUniformityNormalized | DWI\_wavelet-LLH\_glrlm\_LongRunHighGrayLevelEmphasis |
| DP\_wavelet-HLL\_glcm\_ClusterProminence | DWI\_wavelet-LHL\_firstorder\_InterquartileRange |
| DP\_wavelet-HLL\_glcm\_ClusterShade | DWI\_wavelet-LHL\_glcm\_Contrast |
| DP\_wavelet-HLH\_glcm\_Correlation | DWI\_wavelet-LHH\_glcm\_Correlation |
| DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis | DWI\_wavelet-LHH\_glszm\_GrayLevelNonUniformityNormalized |
| DP\_wavelet-HHL\_firstorder\_Skewness | DWI\_wavelet-LHH\_glszm\_SmallAreaLowGrayLevelEmphasis |
| DP\_wavelet-HHL\_glszm\_SmallAreaEmphasis | DWI\_wavelet-HLL\_glcm\_ClusterShade |
| DP\_wavelet-HHH\_glcm\_ClusterShade | DWI\_wavelet-HLH\_firstorder\_Median |
| DP\_wavelet-LLL\_glcm\_Id | DWI\_wavelet-HHL\_glrlm\_ShortRunEmphasis |
|  | DWI\_wavelet-HHH\_glcm\_Idmn |
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| **T2 (13)** | **T1 (16)** |
| T2\_log-sigma-3-0-mm-3D\_firstorder\_Skewness | T1\_original\_shape\_SurfaceVolumeRatio |
| T2\_log-sigma-3-0-mm-3D\_glcm\_InverseVariance | T1\_original\_firstorder\_10Percentile |
| T2\_log-sigma-4-0-mm-3D\_glszm\_ZoneVariance | T1\_original\_glcm\_Idn |
| T2\_log-sigma-5-0-mm-3D\_glcm\_Correlation | T1\_log-sigma-3-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis |
| T2\_log-sigma-5-0-mm-3D\_glszm\_LowGrayLevelZoneEmphasis | T1\_log-sigma-4-0-mm-3D\_glszm\_SmallAreaLowGrayLevelEmphasis |
| T2\_wavelet-LLH\_glcm\_Correlation | T1\_wavelet-LLH\_firstorder\_Kurtosis |
| T2\_wavelet-LLH\_glszm\_LargeAreaLowGrayLevelEmphasis | T1\_wavelet-LLH\_glcm\_Imc2 |
| T2\_wavelet-LHL\_glcm\_ClusterShade | T1\_wavelet-LLH\_glszm\_LargeAreaHighGrayLevelEmphasis |
| T2\_wavelet-LHL\_glcm\_InverseVariance | T1\_wavelet-LHL\_firstorder\_10Percentile |
| T2\_wavelet-HLH\_glcm\_SumEntropy | T1\_wavelet-LHL\_glszm\_SmallAreaEmphasis |
| T2\_wavelet-HHH\_firstorder\_RootMeanSquared | T1\_wavelet-LHH\_firstorder\_10Percentile |
| T2\_wavelet-HHH\_glcm\_Correlation | T1\_wavelet-LHH\_glcm\_Correlation |
| T2\_wavelet-LLL\_glszm\_SmallAreaEmphasis | T1\_wavelet-HLL\_glszm\_SmallAreaEmphasis |
|  | T1\_wavelet-HLH\_firstorder\_Median |
|  | T1\_wavelet-HHL\_glszm\_SmallAreaLowGrayLevelEmphasis |
|  | T1\_wavelet-HHH\_glrlm\_RunVariance |
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| **AP+DWI (16)** | **AP+PP (17)** |
| AP\_log-sigma-3-0-mm-3D\_glcm\_Imc2 | AP\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance |
| AP\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance | AP\_log-sigma-5-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis |
| AP\_log-sigma-5-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis | AP\_wavelet-LLH\_glcm\_Imc2 |
| AP\_wavelet-LHL\_firstorder\_90Percentile | AP\_wavelet-LHL\_firstorder\_90Percentile |
| AP\_wavelet-LHL\_gldm\_LargeDependenceHighGrayLevelEmphasis | AP\_wavelet-LHL\_firstorder\_Skewness |
| AP\_wavelet-LHH\_glszm\_SizeZoneNonUniformityNormalized | AP\_wavelet-HLL\_gldm\_LargeDependenceHighGrayLevelEmphasis |
| AP\_wavelet-HHL\_glrlm\_ShortRunEmphasis | AP\_wavelet-HLH\_glcm\_Autocorrelation |
| AP\_wavelet-LLL\_glcm\_ClusterProminence | AP\_wavelet-HLH\_glszm\_HighGrayLevelZoneEmphasis |
| DWI\_log-sigma-4-0-mm-3D\_firstorder\_Maximum | AP\_wavelet-HHL\_gldm\_DependenceVariance |
| DWI\_wavelet-LLH\_glrlm\_LongRunHighGrayLevelEmphasis | AP\_wavelet-LLL\_glcm\_ClusterProminence |
| DWI\_wavelet-LHL\_glcm\_InverseVariance | PP\_original\_shape\_Sphericity |
| DWI\_wavelet-LHH\_glcm\_Correlation | PP\_log-sigma-4-0-mm-3D\_gldm\_SmallDependenceHighGrayLevelEmphasis |
| DWI\_wavelet-LHH\_glszm\_SmallAreaLowGrayLevelEmphasis | PP\_wavelet-LLH\_firstorder\_Maximum |
| DWI\_wavelet-HLL\_glcm\_ClusterShade | PP\_wavelet-LHL\_glrlm\_HighGrayLevelRunEmphasis |
| DWI\_wavelet-HLH\_glszm\_LargeAreaLowGrayLevelEmphasis | PP\_wavelet-HLL\_firstorder\_Maximum |
| DWI\_wavelet-HHH\_glcm\_Idmn | PP\_wavelet-HHH\_glcm\_ClusterShade |
|  | PP\_wavelet-LLL\_glcm\_Idm |
|  |  |
| **AP+DP (15)** | **PP+DP (17)** |
| AP\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance | PP\_original\_shape\_MajorAxisLength |
| AP\_log-sigma-5-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis | PP\_log-sigma-3-0-mm-3D\_glcm\_DifferenceVariance |
| AP\_wavelet-LHL\_firstorder\_90Percentile | PP\_log-sigma-4-0-mm-3D\_firstorder\_Skewness |
| AP\_wavelet-LHL\_firstorder\_Skewness | PP\_wavelet-LHH\_firstorder\_Median |
| AP\_wavelet-LLL\_glcm\_ClusterProminence | PP\_wavelet-HLL\_firstorder\_Kurtosis |
| DP\_original\_glcm\_Idmn | PP\_wavelet-HLL\_firstorder\_Maximum |
| DP\_wavelet-LHL\_glcm\_Correlation | PP\_wavelet-HLL\_firstorder\_Skewness |
| DP\_wavelet-LHL\_glcm\_DifferenceVariance | PP\_wavelet-HHH\_glcm\_ClusterShade |
| DP\_wavelet-HLL\_glcm\_ClusterShade | DP\_log-sigma-3-0-mm-3D\_glszm\_SmallAreaEmphasis |
| DP\_wavelet-HLH\_glcm\_Correlation | DP\_wavelet-LHL\_glcm\_DifferenceAverage |
| DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis | DP\_wavelet-LHL\_glszm\_SizeZoneNonUniformityNormalized |
| DP\_wavelet-HHL\_firstorder\_Skewness | DP\_wavelet-HLH\_glcm\_Autocorrelation |
| DP\_wavelet-HHL\_glszm\_SizeZoneNonUniformityNormalized | DP\_wavelet-HLH\_glcm\_Correlation |
| DP\_wavelet-HHH\_glcm\_ClusterShade | DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis |
| DP\_wavelet-LLL\_glcm\_Id | DP\_wavelet-HHL\_firstorder\_Skewness |
|  | DP\_wavelet-HHL\_glszm\_SmallAreaEmphasis |
|  | DP\_wavelet-HHH\_glcm\_ClusterShade |
|  |  |
| **PP+DWI (18)** | **T1+T2 (20)** |
| PP\_original\_shape\_Sphericity | T1\_original\_firstorder\_10Percentile |
| PP\_log-sigma-3-0-mm-3D\_glcm\_Contrast | T1\_original\_firstorder\_Skewness |
| PP\_log-sigma-4-0-mm-3D\_gldm\_SmallDependenceHighGrayLevelEmphasis | T1\_original\_glszm\_LargeAreaLowGrayLevelEmphasis |
| PP\_wavelet-LLH\_firstorder\_Maximum | T1\_log-sigma-3-0-mm-3D\_firstorder\_Skewness |
| PP\_wavelet-HLL\_firstorder\_Kurtosis | T1\_log-sigma-3-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis |
| PP\_wavelet-HLL\_glcm\_ClusterShade | T1\_log-sigma-4-0-mm-3D\_glszm\_SmallAreaLowGrayLevelEmphasis |
| PP\_wavelet-HHH\_glcm\_ClusterShade | T1\_wavelet-LLH\_glcm\_ClusterShade |
| PP\_wavelet-LLL\_glcm\_Id | T1\_wavelet-LHL\_glszm\_SmallAreaEmphasis |
| DWI\_log-sigma-3-0-mm-3D\_glszm\_LargeAreaHighGrayLevelEmphasis | T1\_wavelet-LHH\_firstorder\_10Percentile |
| DWI\_log-sigma-3-0-mm-3D\_glszm\_SmallAreaLowGrayLevelEmphasis | T1\_wavelet-HLL\_glszm\_SmallAreaEmphasis |
| DWI\_wavelet-LLH\_glcm\_Idmn | T1\_wavelet-HLH\_firstorder\_Median |
| DWI\_wavelet-LLH\_glszm\_LargeAreaLowGrayLevelEmphasis | T1\_wavelet-HHH\_glrlm\_RunVariance |
| DWI\_wavelet-LHL\_firstorder\_InterquartileRange | T2\_log-sigma-4-0-mm-3D\_firstorder\_Skewness |
| DWI\_wavelet-LHH\_glcm\_Correlation | T2\_log-sigma-4-0-mm-3D\_glszm\_LargeAreaHighGrayLevelEmphasis |
| DWI\_wavelet-HLL\_glcm\_ClusterShade | T2\_log-sigma-4-0-mm-3D\_glszm\_ZoneVariance |
| DWI\_wavelet-HLH\_firstorder\_Median | T2\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance |
| DWI\_wavelet-HLH\_firstorder\_RootMeanSquared | T2\_log-sigma-5-0-mm-3D\_firstorder\_Skewness |
| DWI\_wavelet-HHL\_gldm\_LargeDependenceLowGrayLevelEmphasis | T2\_wavelet-HLH\_glcm\_SumEntropy |
|  | T2\_wavelet-HHH\_glszm\_SmallAreaLowGrayLevelEmphasis |
|  | T2\_wavelet-LLL\_gldm\_SmallDependenceEmphasis |
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| **AP+PP+DP (15)** | **AP+PP+DWI (19)** |
| AP\_wavelet-LHL\_firstorder\_90Percentile | AP\_log-sigma-3-0-mm-3D\_glcm\_Imc2 |
| AP\_wavelet-LLL\_glcm\_ClusterProminence | AP\_wavelet-LHH\_glszm\_SizeZoneNonUniformityNormalized |
| PP\_log-sigma-3-0-mm-3D\_glcm\_DifferenceVariance | AP\_wavelet-HLH\_glcm\_Autocorrelation |
| PP\_wavelet-LLH\_firstorder\_Maximum | AP\_wavelet-LLL\_glcm\_ClusterProminence |
| PP\_wavelet-HLL\_firstorder\_Kurtosis | PP\_original\_shape\_Sphericity |
| PP\_wavelet-HLL\_firstorder\_Maximum | PP\_log-sigma-4-0-mm-3D\_gldm\_SmallDependenceHighGrayLevelEmphasis |
| PP\_wavelet-HLL\_firstorder\_Skewness | PP\_wavelet-HLL\_firstorder\_Kurtosis |
| PP\_wavelet-HHH\_glcm\_ClusterShade | PP\_wavelet-HLL\_firstorder\_Skewness |
| DP\_wavelet-LHL\_glcm\_DifferenceAverage | PP\_wavelet-HLL\_glcm\_Contrast |
| DP\_wavelet-LHL\_glszm\_SizeZoneNonUniformityNormalized | PP\_wavelet-HLH\_firstorder\_InterquartileRange |
| DP\_wavelet-HLH\_glcm\_Correlation | PP\_wavelet-HLH\_glrlm\_ShortRunHighGrayLevelEmphasis |
| DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis | PP\_wavelet-HHH\_glcm\_ClusterShade |
| DP\_wavelet-HLH\_gldm\_LargeDependenceHighGrayLevelEmphasis | PP\_wavelet-LLL\_glcm\_Idm |
| DP\_wavelet-HHL\_firstorder\_Skewness | DWI\_original\_glcm\_Id |
| DP\_wavelet-HHH\_glcm\_ClusterShade | DWI\_wavelet-LLH\_glszm\_LargeAreaLowGrayLevelEmphasis |
|  | DWI\_wavelet-LHH\_glszm\_GrayLevelNonUniformityNormalized |
|  | DWI\_wavelet-HLL\_glcm\_ClusterShade |
|  | DWI\_wavelet-HLH\_firstorder\_Median |
|  | DWI\_wavelet-HHH\_glszm\_SmallAreaEmphasis |
|  |  |
| **AP+DP+DWI (20)** | **PP+DP+DWI (20)** |
| AP\_log-sigma-4-0-mm-3D\_gldm\_DependenceVariance | PP\_original\_shape\_MajorAxisLength |
| AP\_log-sigma-5-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis | PP\_wavelet-LLH\_firstorder\_Maximum |
| AP\_wavelet-LHL\_firstorder\_90Percentile | PP\_wavelet-HLL\_firstorder\_Maximum |
| AP\_wavelet-LHL\_gldm\_LargeDependenceHighGrayLevelEmphasis | PP\_wavelet-HHH\_glcm\_ClusterShade |
| AP\_wavelet-LHH\_glszm\_LargeAreaHighGrayLevelEmphasis | DP\_wavelet-LHL\_glcm\_ClusterShade |
| AP\_wavelet-LLL\_glcm\_ClusterProminence | DP\_wavelet-HLL\_glcm\_ClusterShade |
| DP\_wavelet-LHL\_glcm\_DifferenceVariance | DP\_wavelet-HLH\_glcm\_Autocorrelation |
| DP\_wavelet-HLL\_glcm\_ClusterProminence | DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis |
| DP\_wavelet-HLL\_glcm\_ClusterShade | DP\_wavelet-HHL\_firstorder\_Skewness |
| DP\_wavelet-HHL\_firstorder\_Skewness | DP\_wavelet-HHH\_glcm\_ClusterShade |
| DP\_wavelet-HHL\_glszm\_SizeZoneNonUniformityNormalized | DWI\_original\_glcm\_Id |
| DP\_wavelet-HHH\_glcm\_ClusterShade | DWI\_log-sigma-4-0-mm-3D\_firstorder\_Maximum |
| DWI\_wavelet-LLH\_gldm\_LargeDependenceHighGrayLevelEmphasis | DWI\_wavelet-LHL\_firstorder\_InterquartileRange |
| DWI\_wavelet-LHL\_glcm\_InverseVariance | DWI\_wavelet-LHH\_glszm\_GrayLevelNonUniformityNormalized |
| DWI\_wavelet-LHH\_glszm\_GrayLevelNonUniformityNormalized | DWI\_wavelet-HLL\_glcm\_ClusterShade |
| DWI\_wavelet-HLL\_glcm\_ClusterShade | DWI\_wavelet-HLH\_firstorder\_RootMeanSquared |
| DWI\_wavelet-HLH\_firstorder\_Median | DWI\_wavelet-HLH\_glszm\_LargeAreaLowGrayLevelEmphasis |
| DWI\_wavelet-HLH\_glszm\_LargeAreaLowGrayLevelEmphasis | DWI\_wavelet-HLH\_glszm\_LowGrayLevelZoneEmphasis |
| DWI\_wavelet-HHL\_gldm\_LargeDependenceLowGrayLevelEmphasis | DWI\_wavelet-HHH\_glcm\_InverseVariance |
| DWI\_wavelet-HHH\_glszm\_SmallAreaEmphasis | DWI\_wavelet-HHH\_glszm\_SmallAreaEmphasis |
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| **AP+PP+DP+DWI (20)** | **ALL/Radiomics (18)** |
| AP\_wavelet-LHL\_firstorder\_90Percentile | AP\_wavelet-LHL\_firstorder\_90Percentile |
| AP\_wavelet-LLL\_glcm\_ClusterProminence | AP\_wavelet-HLL\_gldm\_LargeDependenceHighGrayLevelEmphasis |
| PP\_original\_shape\_Sphericity | PP\_log-sigma-3-0-mm-3D\_glcm\_DifferenceVariance |
| PP\_log-sigma-4-0-mm-3D\_gldm\_SmallDependenceHighGrayLevelEmphasis | PP\_wavelet-LLH\_firstorder\_Maximum |
| PP\_wavelet-LLH\_firstorder\_Maximum | PP\_wavelet-HLL\_firstorder\_Maximum |
| PP\_wavelet-HLL\_firstorder\_Maximum | PP\_wavelet-HLH\_firstorder\_InterquartileRange |
| PP\_wavelet-HLL\_glcm\_ClusterProminence | DP\_wavelet-LHL\_glcm\_DifferenceVariance |
| DP\_wavelet-LHL\_glcm\_DifferenceVariance | DP\_wavelet-HLH\_glcm\_Autocorrelation |
| DP\_wavelet-HLL\_glcm\_ClusterShade | DP\_wavelet-HHL\_firstorder\_Skewness |
| DP\_wavelet-HLH\_glcm\_Autocorrelation | DP\_wavelet-HHH\_glcm\_ClusterShade |
| DP\_wavelet-HLH\_glrlm\_LongRunHighGrayLevelEmphasis | DWI\_original\_glcm\_InverseVariance |
| DP\_wavelet-HHL\_firstorder\_Skewness | DWI\_wavelet-HLL\_glcm\_ClusterShade |
| DP\_wavelet-HHH\_glcm\_ClusterShade | T2\_log-sigma-5-0-mm-3D\_firstorder\_Skewness |
| DWI\_original\_glcm\_Id | T1\_log-sigma-3-0-mm-3D\_glszm\_LargeAreaLowGrayLevelEmphasis |
| DWI\_wavelet-LHH\_glszm\_GrayLevelNonUniformityNormalized | T1\_log-sigma-4-0-mm-3D\_glszm\_SmallAreaLowGrayLevelEmphasis |
| DWI\_wavelet-HLL\_glcm\_ClusterShade | T1\_wavelet-LLH\_firstorder\_Kurtosis |
| DWI\_wavelet-HLH\_firstorder\_Median | T1\_wavelet-LHL\_glszm\_SizeZoneNonUniformityNormalized |
| DWI\_wavelet-HLH\_glszm\_LargeAreaLowGrayLevelEmphasis | T1\_wavelet-HLH\_firstorder\_Kurtosis |
| DWI\_wavelet-HHL\_gldm\_LargeDependenceLowGrayLevelEmphasis |  |
| DWI\_wavelet-HHH\_glszm\_SmallAreaEmphasis |  |