

## APPENDIX- A

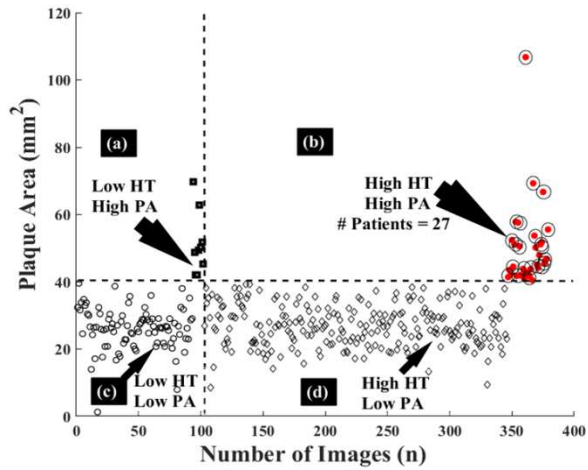


Figure A.1. Hypertension vs. AI plaque area. Top right quadrant are 27 patients with high HT and PA > 40 mm<sup>2</sup>.

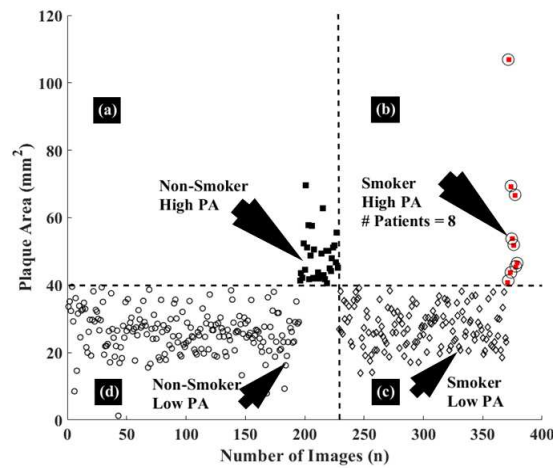


Figure A.2. Smoking parameter Vs. AI plaque area. Top right quadrant are 8 smokers and PA > 40 mm<sup>2</sup>.

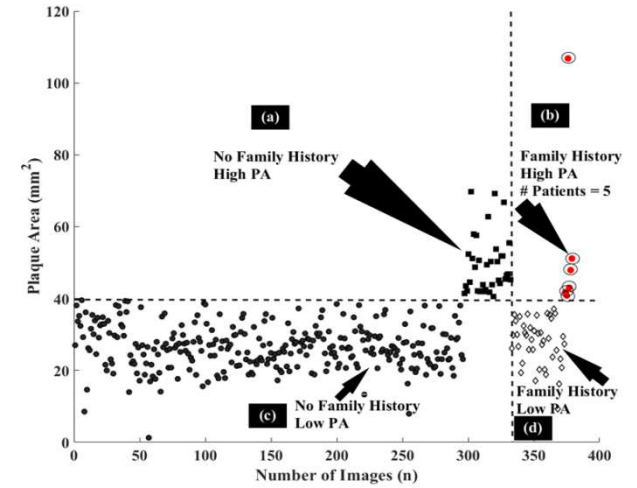


Figure A.3. Family history relation Vs. AI plaque area. Top right quadrant are 5 studies with family history and PA > 40 mm<sup>2</sup>.

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## List of Publications from the Research

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### Journal Publications

1. **Pankaj K. Jain**, Neeraj Sharma, *et al.* Far wall plaque segmentation and area measurement in common and internal carotid artery ultrasound using U-series architectures: An unseen Artificial Intelligence paradigm for stroke risk assessment. *Computers in Biology and Medicine*, 2022; 149:106017. DOI: 10.1016/j.compbimed.2022.106017.
2. **Pankaj K. Jain**, Neeraj Sharma, *et al.* Hybrid Deep Learning Segmentation Models for Atherosclerotic Plaque in Internal Carotid Artery B-mode Ultrasound, *Computers in Biology and Medicine*, (Elsevier), (2021); 136:104721. DOI: 10.1016/j.compbimed.2021.104721.
3. **Pankaj K. Jain**, Neeraj Sharma, *et al.* "Unseen Artificial Intelligence—Deep Learning Paradigm for Segmentation of Low Atherosclerotic Plaque in Carotid Ultrasound: A Multicenter Cardiovascular Study" *Diagnostics* (MDPI), 2021; (11)12: 2257. DOI: 10.3390/diagnostics11122257.
4. **Pankaj K. Jain** Neeraj Sharma, *et al.* "Automated deep learning-based paradigm for high-risk plaque detection in B-mode common carotid ultrasound scans: an asymptomatic Japanese cohort study". *International Angiology* (Minerva Medica), 2021; 41(1):9-23. DOI: 10.23736/S0392-9590.21.04771-4.
5. **Pankaj K Jain** Saurabh Gupta, Arnav Bhavsar, Aditya Nigam, Neeraj Sharma "Localization of the common carotid artery transverse section in B-mode ultrasound image using Faster RCNN: A deep learning approach". *Medical and Biological Engineering and Computing* (Springer), 2020, 58(3):471-482. DOI: 10.1007/s11517-019-02099-3.
6. **Pankaj K. Jain**, Abhishek Dubey, Luca Saba, Narender N. Khanna, John R. Laird, Andrew Nicolaides, Mostafa M. Fouda, Jasjit S. Suri, and Neeraj Sharma "Attention-Based UNet Deep learning model for Plaque Segmentation in Carotid Ultrasound for Stroke Risk Stratification: An Artificial Intelligence Paradigm" *Journal of Cardiovascular Development and Disease* 2022; 9(10):326. DOI: 10.3390/jcdd9100326.
7. **Pankaj K. Jain** Neeraj Sharma, *et al.* "Carotid Imaging and Biomarker Measurement using Deep Learning: A Review on Cardiovascular Risk Assessment" (Communicated)

### Conference Publication:

1. **Pankaj K. Jain** Neeraj Sharma "Hybrid Deep Learning Models for Segmentation of Atherosclerotic Plaque in B-mode Carotid Ultrasound Image" International Conference on Robotics, Control, Automation, and Artificial Intelligence (RCAAI), Springer 2022. (Accepted)
2. Soni Singh, **Pankaj K Jain**, Neeraj Sharma, Mausumi Pohit, "Deep Learning Models for Segmentation of Atherosclerotic Plaque in B-mode Carotid Ultrasound Image Number, International Conference on Data Science and Computational Intelligence (ICDSCI) 2022. (Accepted)