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| Title | Dataset & URL | Description | Method | Accuracy / Metric | Pros | Cons | Ref. |
|---|---|---|---|---|---|---|---|
| End-to-End DL for Arsenicosis | Mobile-captured skin images | Real-world arsenic lesions; Bangladesh | CNN-based end-to-end DL | High classification accuracy (see paper) | Non-invasive; scalable via smartphones | Preprint; not peer-reviewed yet | [1] |
| ArsenicSkinImageBD | 8,892 imgs; Bangladesh | 2-class; official split | Baseline CNNs | Varies by model | Domain-specific; curated | Class imbalance | [2] |
| Lightweight Hybrid CNN | Smartphone dataset | Augmented; preproc | Hybrid CNN + Fire | Acc 98.3%, F1 0.99 | Lightweight; explainable | Preprint; needs validation | [3] |
| ArsenicSkinNet | Arsenicosis dataset | Authors' collection | EfficientNet transfer | Acc 99.6% | Efficient; high acc | Possible overfit | [4] |
| ArsenicNet | Custom dataset | Arsenic skin | Custom DL model | Strong perf. | Targeted model | Needs validation | [5] |
| EfficientNet (ISIC+Local) | ISIC + 8,222 imgs | 6-class derm | EffNet-B3 | High acc & fast | Efficient; fast | Domain shift | [6] |
| EffNet-B0/B1 Transfer | ISIC / ICIAR | Dermoscopy | EffNet-B0/B1 | Strong conf. results | Lightweight; TL | Limited exp. | [7] |
| ConvNeXt Ensemble | ISIC derm | Multi-class | ConvNeXt (Tiny–Large) | SOTA ensemble | Robust accuracy | Heavy inference | [8] |
| LesionNet | ISIC + author | Hybrid features | SIFT + CNN | Competitive | Interpretable hybrid | Slightly lower vs SOTA | [9] |
| Multimodal Ensemble | Image+meta | Multi-input | CNN ensemble+meta | Better F1 | Uses metadata | Metadata required | [10] |
| ConvNeXtV2+Attention | ISIC | Multiclass | Hybrid ConvNeXtV2 | SOTA | Fine-grained | Heavier compute | [11] |
| Aug+Pretrain DL | ISIC | Std derm sets | Ensemble+aug | ↑ accuracy | Boosts small data | Heavy compute | [12] |
| Multi-task Learning | ISIC+meta | Seg+class tasks | Multi-task net | Better gen. | Multi-task boost | Needs extra labels | [13] |
| Arsenic Photo Estimation | Hand/foot photos | Arsenic exposure | CNN (smartphone) | Promising perf. | Non-invasive | Proxy signal noisy | [14] |
| Deep Ensemble (2025) | ISIC composite | Multi-class | Deep ensemble | SOTA | Robustness ↑ | Expensive inference | [15] |

TABLE I

COMPACT SUMMARY OF RECENT WORKS (2022–2025) ON ARSENIC-RELATED AND GENERAL SKIN LESION CLASSIFICATION.