Temporomandibular joint (TMJ) internal derangement represents abnormal changes of the articular disc position between mandibular condyle and temporal bone glenoid fossa. Magnetic resonance imaging (MRI) has been considered the standard, non-invasive, diagnostic imaging tool for patients with clinical symptoms of TMJ soft tissues and disc pathology. Nevertheless, osseous structures are best seen on CT. Cone beam CT (CBCT) has a substantially lower radiation dose compared to helical CT and has become the predominant diagnostic approach in dentistry, maxillofacial orthognathic surgery and TMJ assessment. Hybrid MRI and CBCT imaging has been recently introduced in assessment of TMJ pathology.

CONCLUSION: Contemporary imaging modalities, if used properly and according to adequate clinical implications, are able to depict different pathological processes and play a crucial role in establishing the right diagnosis and monitoring therapeutic effect in TMJ.