



- Barrera-Ochoa, Sergi, Nuria Vidal-Tarrason, Eva Correa-Vázquez, Maria Mercè Reverte-Vinaixa, Jordi Font-Segura, and Xavier Mir-Bullo. 2014. "Pyrocarbon Interposition (Pyrodisk) Implant for Trapeziometacarpal Osteoarthritis: Minimum 5-Year Follow-Up." *Journal of Hand Surgery* 39 (11): 2150–60. <https://doi.org/10.1016/j.jhsa.2014.07.011>.
- Buhler, M., C. M. Chapple, S. Stebbings, B. Sangelaji, and G. D. Baxter. 2019. "Effectiveness of Splinting for Pain and Function in People with Thumb Carpometacarpal Osteoarthritis: A Systematic Review with Meta-Analysis." *Osteoarthritis and Cartilage* 27 (4): 547–59. <https://doi.org/10.1016/j.joca.2018.09.012>.
- Burton, Richard I., and Vincent D. Pellegrini. 1986. "Surgical Management of Basal Joint Arthritis of the Thumb. Part II. Ligament Reconstruction with Tendon Interposition Arthroplast." *Journal of Hand Surgery* 11 (3): 324–32. [https://doi.org/10.1016/S0363-5023\(86\)80137-X](https://doi.org/10.1016/S0363-5023(86)80137-X).
- Carroll, R E. 1987. "Arthrodesis of the Carpometacarpal Joint of the Thumb. A Review of Patients with a Long Postoperative Period." *Clinical Orthopaedics and Related Research*, no. 220 (July): 106–10.
- Cook, Geoffrey S., and Donald H. Lalonde. 2008. "MOC-PSSM CME Article: Management of Thumb Carpometacarpal Joint Arthritis." *Plastic and Reconstructive Surgery* 121 (1S MOC-PS CME COL). <https://doi.org/10.1097/01.prs.0000294708.70340.8c>.
- Day, Charles S., Richard Gelberman, Alpesh A. Patel, Molly T. Vogt, Konstantinos Ditsios, and Martin I. Boyer. 2004. "Basal Joint Osteoarthritis of the Thumb: A Prospective Trial of Steroid Injection and Splinting." *Journal of Hand Surgery* 29 (2): 247–51. <https://doi.org/10.1016/j.jhsa.2003.12.002>.
- Derian, Armen, Julia Amundson, Karl Abi-Aad, Ricardo Vasquez-Duarte, and Douglas Johnson-Greene. 2018. "Accuracy of Ultrasound-Guided versus Palpation-Based Carpometacarpal Joint Injections: A Randomized Pilot Study in Cadavers." *Ultrasound* 26 (4): 245–50. <https://doi.org/10.1177/1742271X18789711>.
- Eaton, R G, and J W Littler. 1973. "Ligament Reconstruction for the Painful Thumb Carpometacarpal Joint." *The Journal of Bone and Joint Surgery, American Volume* 55 (8): 1655–66.
- Eaton, Richard G., Lewis B. Lane, J. William Littler, and John J. Keyser. 1984. "Ligament Reconstruction for the Painful Thumb Carpometacarpal Joint: A Long-Term Assessment." *Journal of Hand Surgery* 9 (5): 692–99. [https://doi.org/10.1016/S0363-5023\(84\)80015-5](https://doi.org/10.1016/S0363-5023(84)80015-5).
- Gervis, and W H. 1949. "Excision of the Trapezium for Osteoarthritis of the Trapezio-Metacarpal Joint." *The Journal of Bone and Joint Surgery, British Volume* 31B (4): 537–39, illust.
- Huang, K., N. Hollevoet, and G. Giddins. 2015. "Thumb Carpometacarpal Joint Total Arthroplasty: A Systematic Review." *Journal of Hand Surgery: European Volume* 40 (4): 338–50. <https://doi.org/10.1177/1753193414563243>.
- Kennedy, Colin D., Mary Claire Manske, and Jerry I. Huang. 2016. "Classifications in Brief: The Eaton-Littler Classification of Thumb Carpometacarpal Joint Arthrosis." *Clinical Orthopaedics and Related Research* 474 (12): 2729–33. <https://doi.org/10.1007/s11999-016-4864-6>.
- Martin-Ferrero, M. 2014. "Ten-Year Long-Term Results of Total Joint Arthroplasties with ARPE® Implant in the Treatment of Trapeziometacarpal Osteoarthritis." *Journal of Hand Surgery: European Volume* 39 (8): 826–32. <https://doi.org/10.1177/1753193413516244>.
- Neumeister, M W, and M Sauerbier. 2020. *Problems in Hand Surgery - Solutions to Recover Function*. 1st ed. New York: Thieme.
- Swigart, Carrie R., Richard G. Eaton, Steven Z. Glickel, and Caryl Johnson. 1999. "Splinting in the Treatment of Arthritis of the First Carpometacarpal Joint." *Journal of Hand Surgery* 24 (1): 86–91. <https://doi.org/10.1053/jhsu.1999.jhsu24a0086>.
- Tomaino, Matthew M. 2006. "Thumb by Metacarpal Extension Osteotomy: Rationale and Efficacy for Eaton Stage I Disease." *Hand Clinics* 22 (2): 137–41. <https://doi.org/10.1016/j.hcl.2006.02.008>.
- Vermeulen, G. M., S. M. Brink, H. Slijper, R. Feitz, T. M. Moojen, S. E.R. Hovius, and R. W. Selles. 2014. "Trapeziometacarpal Arthrodesis or Trapeziectomy with Ligament Reconstruction in Primary Trapeziometacarpal Osteoarthritis: A Randomized Controlled Trial." *Journal of Bone and Joint Surgery - American Volume* 96 (9): 726–33. <https://doi.org/10.2106/JBJS.L.01344>.
- Wajon, Anne, Toby Vinycomb, Emma Carr, Ian Edmunds, and Louise Ada. 2015. "Surgery for Thumb (Trapeziometacarpal Joint) Osteoarthritis." *Cochrane Database of Systematic Reviews* 2017 (3). <https://doi.org/10.1002/14651858.CD004631.pub4>.
- Yao, Jeffrey, and Min J. Park. 2008. "Early Treatment of Degenerative Arthritis of the Thumb Carpometacarpal Joint." *Hand Clinics* 24 (3): 251–61. <https://doi.org/10.1016/j.hcl.2008.03.001>.

**MODULE 3 Trauma Algorithm Mark Sheet****Candidate Name:** Algorithm Example**Algorithm title:** Thumb CMC joint pain

NB: It is essential that each assessor justifies their marks with written comments. For each section, please comment on (1) what was good, (2) not so good, and (3) how to improve for the future.

Clinical content

- Does the candidate demonstrate a good level of understanding of the topic?
- Is the literature analysed & interpreted, with limitations in current knowledge and practice accommodated?
- Are clinical and basic science aspects well integrated where appropriate?
- Does the algorithm demonstrate higher order thinking?
- Does the concluding clinical pathway adequately encapsulate the current state of knowledge?

Comments – Clinical Content

This algorithm has demonstrated a clear understanding of this complex topic and meets the standard required to pass this component of the Diploma in Hand Surgery. It includes non-operative and operative options and there has been a clear and comprehensive review of the literature.

The following suggestions will further enhance the submission, lead to a higher mark and possible Merit:

- The author has prepared a non-operative treatment arm based on the Eaton-Littler classification on the left-hand side of the algorithm and an operative treatment arm also based on the Eaton-Littler classification on the right-hand side. Incorporating both arms under a single classification will show further higher order thinking and complexity of thought.
- Several treatment boxes include more than one treatment option. The author should critically appraise the literature and ideally advise a single treatment option to follow for each part of the treatment algorithm. For example, Trapeziectomy +/- LRTI is described twice – the author should make it clear whether an LRTI is to be utilised or not and if so, for which indications.
- Despite a thorough literature review, none of the recommendations or treatment decisions within the algorithm have been referenced back to the original literature articles. We suggest that every box in the algorithm should have a super-script number identifying which article in the reference list has been used to provide this decision – and which article the reader may wish to study to gain further understanding if needed.

Mark 33 /50

Organisation / Presentation:

- Is the algorithm focussed with clear organisation of information?
- Is it structured logically?
- Is the general presentation of the algorithm set out clearly and to a good standard?
- Does the algorithm use technical language appropriately, are abbreviations listed, and is the standard of English acceptable?
- Is the reference list up to date and does it contain relevant citations?

Comments – Organisation and Presentation

The algorithm has been presented in a neat, logical and flowing format. It has been well laid out and completely fills the full A4 page with no unused areas. The boxes and treatment arrows are nicely aligned and are easy to follow. The author has utilised 4 different colours of boxes and three different colours of text through the algorithm and there doesn't seem to be any consistency between these colours. Ideally one colour should be used for investigations, one for decision questions, one for decision outcomes, one for operative, one for non-operative etc.

The following suggestions will further enhance the submission and lead to a higher mark and potential award of Merit:

- The author has included an illustration showing 4 radiographs describing the Eaton-Littler classification. We feel that someone reading this algorithm will know this radiographic classification and images are thus not required and this space could have been used more creatively. We advise the author that illustrations and radiographs often take considerable space and can detract from the quality of the algorithm and are to be generally avoided if possible.
- It is very pleasing to see that the author has followed the guidelines and submitted the pictorial algorithm on a single page. Authors are reminded that algorithms that fill more than one page will be returned without being marked. This submission has a well formatted abbreviations table and references list. However, these should all be presented on a single second page of the submission and this could be easily achieved with a little formatting and change in font size.

Mark 35 /50

Algorithm Mark:

	Clinical Content	Organisation & presentation	Total Mark %
Averaged mark from both assessors	<u>33/50</u>	<u>35/50</u>	<u>68 %</u>

Important note – The markers stated that a mark of 73% would be likely if the references were linked into the algorithm as recommended, to support decision making, and at score of around 80% would be achievable if all recommendations in the marker's comments were actioned.

Marking Guide for Module 3 Trauma Algorithm:

Mark	Explanation
Outstanding: 90 -100%	Work of excellent quality throughout. Excellent presentation.
Excellent: 80 - 89%	Work of very high to excellent quality showing originality, high accuracy, thorough understanding, and critical appraisal. Shows a wide and thorough understanding of the material studied and the relevant literature, and the ability to apply the theory and methods learned to solve unfamiliar problems. Very good presentation.
Good Pass (allows merit award):70-79%	Work of good to high quality showing evidence of understanding of the research topic, good accuracy, good structure and relevant conclusions. Shows a good knowledge of the material studied and the relevant literature and some ability to tackle unfamiliar problems. Good presentation.
Pass: 60-69%	Work shows a clear grasp of relevant facts and issues and reveals an attempt to create a coherent whole. It comprises reasonably clear and attainable objectives, adequate literature review and some originality. Presentation is acceptable, minor errors allowed.
Fail: 50-59%	Work shows a satisfactory understanding of the research topic and basic knowledge of the relevant literature but with little or no originality and limited accuracy. Shows clear but limited objectives and does not always reach a conclusion. Presentation adequate but could be improved.
Fail: 40-49%	Work shows some understanding of the main elements of the research topic and some knowledge of the relevant literature. Shows a limited level of accuracy with little analysis of data or attempt to discuss its significance. Presentation poor.
Fail: 0-39%	Limited relevant material presented. Little understanding of research topic. Unclear or unsubstantiated arguments with very poor accuracy and understanding. Presentation unacceptable.