

# PROPUNERE DE TEMATICA SI BIBLIOGRAFIE PENTRU EXAMENUL DE ADMITERE LA DOCTORAT 2022

UMFCD – SP.FOISOR – Prof Dr. Stoica Ioan Cristian

Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020

## 1. FORMA, POZITIONAREA SI ORIENTAREA ACETABULARA ROL IN ENDOPROTEZAREA SOLDULUI

### Bibliografie

- ✓ 0. Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ 1. Anda S, Svenningsen S, Dale LG, Benum B. The acetabular sector angle of the adult hip determined by computed tomography. *Acta Radiol Diagn.* 1986;27:443–447.
- ✓ 2. Anda S, Svenningsen S, Grontved T, Benum B. Pelvic inclination and spatial orientation of the acetabulum: a radiographic, computed tomographic and clinical investigation. *Acta Radiol.* 1990;31:389–394.
- ✓ 3. Beck M, Leunig M, Parvizi J, Boutier V, Wyss D, Ganz R. Anterior femoral impingement: part II. Midterm results of surgical treatment. *Clin Orthop Relat Res.* 2004;418:67–73.
- ✓ 4. Beck M, Kalhor M, Leunig M, Ganz R. Hip morphology influences the pattern of damage to the acetabular cartilage. *J Bone Joint Surg Br.* 2005;87:12–18.
- ✓ 5. Bullough P, Goodfellow J, Greenwald AS, O'Connor J. Incongruent surfaces in the human hip joint. *Nature.* 1968;217:1290.
- ✓ 6. Byers PD, Contepomi A, Farkas TA. A post-mortem study of the hip joint. *Ann Rheum Dis.* 1970;29:15–31.
- ✓ 7. Clark JM, Freeman MAR, Witham D. The relation of neck orientation to the shape of the proximal femur. *J Arthroplasty.* 1987;2:99–109.
- ✓ 8. Cohen J. *Statistical power analysis for the behavioral sciences.* Hillsdale, N.J.: L. Erlbaum Associates, 1988: 16–18.
- ✓ 9. Daskalogiannaki ME, Gurtsoyannis NC. Variation in the appearance of the normal sacroiliac joint on pelvic CT. *Clin Radiol.* 1998;53:742–746.
- ✓ 10. DiGioia A, Hafez MA, Jaramaz B, Levinson TJ, Moody JE. Functional pelvic orientation measured from lateral standing and sitting radiographs. *Clin Orthop Relat Res.* 2006;453:272–276.
- ✓ 11. Dora C, Zurbach J, Hersche O, Ganz R. Pathomorphological characteristics of posttraumatic acetabular dysplasia. *J Orthop Trauma.* 2000;14:483–489.
- ✓ 12. Eckman K, Hafez MA, Ed F, Jaramaz B, Levison TJ, DiGioia AM 3rd. Accuracy of pelvic flexion measurements from lateral radiographs. *Clin Orthop Relat Res.* 2006;451:154–160.
- ✓ 13. Eckstein F, von Eisenhart-Rothe R, Landgraf J, Adam C, Loehe F, Müller-Gerbl M, Putz R. Quantitative analysis of incongruity, contact areas and cartilage thickness in the human hip joint. *Acta Anatomica.* 1997;158:192–204.
- ✓ 14. Effenberger H, Koebke J, Wilke R, Hautmann J, Witzel U, Imhof M, Richolt J. Acetabular shape and cementless cups. Comparison of osteoarthritic hips and implant design [in German]. *Orthopäde.* 2004;33:1042–1050.
- ✓ 15. Eijer H, Myers SR, Ganz R. Anterior femoroacetabular impingement after femoral neck fractures. *J Orthop Trauma.* 2001;15:475–481.
- ✓ 16. Fafli CP, Prassopoulos PK, Daskalogiannaki ME, Gourtsoyannis NC. Variation in the appearance of the normal sacroiliac joint on pelvic CT. *Clin Radiol.* 1998;53:742–746.

- ✓ 17. Falliner A, Hahne HJ, Hassenpflug J. Sonographic investigation of anatomic specimens of infant hip joints. *J Pediatr Orthop Br.* 2002;11:192–203.
- ✓ 18. Ganz R, Gill TJ, Gauthier E, Ganz K, Krugel N, Berlemann U. Surgical dislocation of the adult hip: a technique with full access to the femoral head and acetabulum without the risk of avascular necrosis. *J Bone Joint Surg Br.* 2001;83:1119–1124.
- ✓ 19. Ganz R, Klaue K, Vinh TS, Mast JW. A new periacetabular osteotomy for the treatment of hip dysplasia: Technique and preliminary results. *Clin Orthop Relat Res.* 1988;232:26–36.
- ✓ 20. Ganz R, Leunig M, Leunig-Ganz K, Harris WH: The etiology of osteoarthritis of the hip. *Clin Orthop Rel Res.* 2008;466:264–272.
- ✓ 21. Ganz R, Parvizi J, Beck M, Leunig M, Nötzli H, Siebenrock KA. Femoroacetabular impingement—a cause for osteoarthritis of the hip. *Clin Orthop Relat Res.* 2003;417:112–120.
- ✓ 22. Gekeler J. Coxarthrosis with a deep acetabulum (proceedings) [in German]. *Z Orthop Ihre Grenzgeb.* 1978;116:454–459.
- ✓ 23. Giori NJ, Trousdale RT. Acetabular retroversion is associated with osteoarthritis of the hip. *Clin Orthop Relat Res.* 2003;417:263–269.
- ✓ 24. Goodman DA, Feighan JF, Smith AD, Latimer B, Buly RL, Cooperman DR. Subclinical slipped capital femoral epiphysis: relation to osteoarthritis of the hip. *J Bone Joint Surg Am.* 1997;79:1489–1497.
- ✓ 25. Gu D, Dai K, Wang Y, Hu X, Xi J. Morphologic features of the acetabulum bone joint area [in Chinese]. *J Biomed Eng.* 2003;20:618–621.
- ✓ 26. Ito K, Leunig M, Ganz R. Histopathologic features of the acetabular labrum in femoroacetabular impingement. *Clin Orthop Relat Res.* 2004;429:262–271.
- ✓ 27. Ito K, Minka MA 2nd, Leunig M, Werlen S, Ganz R. Femoro-acetabular impingement and the cam effect: an MRI-based quantitative anatomic study of the femoral head-neck offset. *J Bone Joint Surg Br.* 2001;83:171–176.
- ✓ 28. Jamali AA, Mladenov K, Meyer DC, Martinez A, Beck M, Ganz R, Leunig M. Anteroposterior pelvic radiographs to assess acetabular retroversion: high validity of the “cross-over-sign”. *J Orthop Res.* 2007;25:758–765.
- ✓ 29. Kalberer F, Sierra RJ, Madan SS, Ganz R, Leunig M. Projection of the ischial spine into the pelvic cavity: a new sign for acetabular retroversion on plain radiographs. *Clin Orthop Relat Res.* 2008;466:677–683.
- ✓ 30. Kloen P, Leunig M, Ganz R. Early lesions of the labrum and the acetabular cartilage in osteonecrosis of the femoral head. *J Bone Joint Surg Br.* 2002;84:66–69.
- ✓ 31. Lavigne M, Parvizi J, Beck M, Siebenrock K, Ganz R, Leunig M. Anterior femoroacetabular impingement: part I. Techniques of joint preserving surgery. *Clin Orthop Rel Res.* 2004;418:61–66.
- ✓ 32. Lazennec JY, Charlot N, Gorin M, Roger B, Arafat N, Bissery A, Saillant G. Hip spine relationship: a radio-anatomical study for optimization in acetabular cup positioning. *Surg Radiol Anat.* 2004;26:136–144.
- ✓ 33. Lembeck B, Mueller O, Reize P, Wuelker N. Pelvic tilt makes acetabular cup navigation inaccurate. *Acta Orthop.* 2005;76:517–523.
- ✓ 34. Lequesne M. Mesure des angles fondamentaux de la hanche radiographique de l'adulte par un rapporteur combine. *Rev Rhum.* 1963;30:479–485.
- ✓ 35. Leunig M, Beck M, Woo A, Dora C, Kerboull M, Ganz R. Acetabular rim degeneration: a constant finding in the aged hip. *Clin Orthop Relat Res.* 2003;413:201–207.
- ✓ 36. Leunig M, Cassillas MM, Hamlet M, Herrsche O, Nötzli T, Ganz R. Slipped capital femoral epiphysis: early mechanical damage to the acetabular cartilage by a prominent femoral metaphysis. *Acta Orthop Scand.* 2000;71:370–375.

## 2. ROLUL IMAGISTICII 3-D IN STUDIUL SI TRATAMENTUL INSTABILITATILOR DE GENUNCHI

### BIBLIOGRAFIE

- ✓ Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ 1. Svoboda SJ. ACL injury and posttraumatic osteoarthritis. Clin Sports Med. 2014 Oct;33(4):633-40. doi: 10.1016/j.csm.2014.06.008. PMID: 25280613
- 2. Nessler T, Denney L, Sampley J. ACL Injury Prevention: What Does Research Tell Us? Curr Rev Musculoskelet Med. 2017 Sep;10(3):281-288. doi: 10.1007/s12178-017-9416-5. PMID: 28656531; PMCID: PMC5577417.
- 3. Gokeler A, Neuhaus D, Benjaminse A, Grooms DR, Baumeister J. Principles of Motor Learning to Support Neuroplasticity After ACL Injury: Implications for Optimizing Performance and Reducing Risk of Second ACL Injury. Sports Med. 2019 Jun;49(6):853-865. doi: 10.1007/s40279-019-01058-0. Erratum in: Sports Med. 2019 Feb 21;; PMID: 30719683; PMCID: PMC6548061.
- 4. Heard WM, Chahal J, Bach BR Jr. Recognizing and managing complications in ACL reconstruction. Sports Med Arthrosc Rev. 2013 Jun;21(2):106-12. doi: 10.1097/JSA.0b013e318290070c. PMID: 23649158.
- ✓ 5. T Vermersch 1, S Lustig 2, O Reynaud 2, C Debette 2, E Servien 2, P Neyret 2 CT assessment of femoral tunnel placement after partial ACL reconstruction . DOI: 10.1016/j.otsr.2015.12.012. PMID: 26922042
- ✓ 6. Daniel Hensler , Zachary M Working, Kenneth D Illingworth, Scott Tashman, Freddie H Fu Correlation between femoral tunnel length and tunnel position in ACL reconstruction.DOI: 10.2106/JBJS.L.01315. PMID: 24257661
- ✓ 7. B Parkinson , R Gogna , C Robb , P Thompson , T Spalding Anatomic ACL reconstruction: the normal central tibial footprint position and a standardised technique for measuring tibial tunnel location on 3D CT . DOI: 10.1007/s00167-015-3683-8. PMID: 26130426
- 8. Kenneth David Illingworth 1, Daniel Hensler, Zachary Mark Working, Jeffrey Alexander Macalena, Scott Tashman, Freddie H Fu A simple evaluation of anterior cruciate ligament femoral tunnel position: the inclination angle and femoral tunnel angle. DOI: 10.1177/0363546511420128.PMID: 21908719
- ✓ 9. Tiago Lazzaretti Fernandes ,Nuno Miguel Morais Fonseca Martins Felipe de Andrade Watai Cyro Albuquerque Neto André Pedrinelli IArnaldo José Hernandez Institute of Orthopedics and Traumatology, Hospital das Clínicas, University of São Paulo, Medical School. Brazil, - 3D computer tomography for measurement of femoral position in acl reconstruction
- ✓ 10. Jonathan H Bird , Michael R Carmont, Manpreet Dhillon, Nick Smith, Charlie Brown, Peter Thompson, Tim Spalding . Validation of a new technique to determine midbundle femoral tunnel position in anterior cruciate ligament reconstruction using 3-dimensional computed tomography analysis. DOI: 10.1016/j.arthro.2011.03.077.PMID: 21741796
- ✓ 11. Luigi Sirleo , Massimo Innocenti , Matteo Innocenti , Roberto Civinini , Christian Carulli , Fabrizio Matassi. Post-operative 3D CT feedback improves accuracy and precision in the learning curve of anatomic ACL femoral tunnel placement. DOI: 10.1007/s00167-017-4614-7. PMID: 28631143
- 12. Faizal Rayan, Shashi Kumar Nanjayan, Conal Quah, Darryl Ramoutar, Sujith Konan, and Fares S Haddad . Review of evolution of tunnel position in anterior cruciate ligament reconstruction World J Orthop. 2015 Mar 18; 6(2): 252–262. Published online 2015 Mar 18. doi: 10.5312/wjo.v6.i2.252PMID: 25793165

### 3. TEHNICI DE STABILIZARE SI REZOLVARE A INSTABILITATII DE GENUNCHI PRIN LEZIUNE DE LIGAMENT INCRUCISAT ANTERIOR

#### BIBLIOGRAFIE:

- ✓ Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ [1] Kim Y-M, Joo Y-B, Lee K-Y, Hwang S-J. Femoral Footprint for Anatomical Single-Bundle Anterior Cruciate Ligament Reconstruction: A Cadaveric Study. *Knee Surg Relat Res* 2018;30:128–32. <https://doi.org/10.5792/ksrr.17.057>.
- ✓ [2] Chae I-J, Bae J-H, Wang J-H, Jeon J, Park J-H. Double-bundle anterior cruciate ligament reconstruction with split Achilles allograft and single tibia tunnel for small ACL tibial footprint : technical note with clinical results. *Arch Orthop Trauma Surg* 2013;133:819–25. <https://doi.org/10.1007/s00402-013-1734-5>.
- ✓ [3] Buoncristiani AM, Tjoumakaris FP, Starman JS, Ferretti M, Fu FH. Anatomic Double-Bundle Anterior Cruciate Ligament Reconstruction. *Arthroscopy: The Journal of Arthroscopic & Related Surgery* 2006;22:1000–6. <https://doi.org/10.1016/j.arthro.2006.06.005>.
- ✓ [4] Kim SH, Jung YB, Song MK, Lee SH, Jung HJ, Lee HJ, et al. Comparison of double-bundle anterior cruciate ligament (ACL) reconstruction and single-bundle reconstruction with remnant pull-out suture. *Knee Surg Sports Traumatol Arthrosc* 2014;22:2085–93. <https://doi.org/10.1007/s00167-013-2619-4>.
- ✓ [5] Mogos S, Sendrea B, Stoica IC. Combined Anatomic Anterior Cruciate Ligament and Anterolateral Ligament Reconstruction n.d.:7.
- ✓ [6] Ra HJ, Kim J-H, Lee D-H. Comparative clinical outcomes of anterolateral ligament reconstruction versus lateral extra-articular tenodesis in combination with anterior cruciate ligament reconstruction: systematic review and meta-analysis. *Arch Orthop Trauma Surg* 2020;140:923–31. <https://doi.org/10.1007/s00402-020-03393-8>.
- ✓ [7] Geeslin AG, Chahla J, Moatshe G, Muckenhirn KJ, Kruckeberg BM, Brady AW, et al. Anterolateral Knee Extra-articular Stabilizers: A Robotic Sectioning Study of the Anterolateral Ligament and Distal Iliotibial Band Kaplan Fibers. *Am J Sports Med* 2018;46:1352–61. <https://doi.org/10.1177/0363546518759053>.
- ✓ [8] Spencer L, Burkhart TA, Tran MN, Rezansoff AJ, Deo S, Catherine S, et al. Biomechanical Analysis of Simulated Clinical Testing and Reconstruction of the Anterolateral Ligament of the Knee. *Am J Sports Med* 2015;43:2189–97. <https://doi.org/10.1177/0363546515589166>.
- ✓ [9] Zaffagnini S, Signorelli C, Grassi A, Yue H, Raggi F, Urrizola F, et al. Assessment of the pivot shift using inertial sensors. *Curr Rev Musculoskelet Med* 2016;9:160–3. <https://doi.org/10.1007/s12178-016-9333-z>.

### 4. ROLUL PANTEI POSTERIOARE TIBIALE IN INSTABILITATILE DE GENUNCHI

#### Bibliografie:

- ✓ Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020

- ✓ Zeng C, Cheng L, Wei J, et al. The influence of the tibial plateau slopes on injury of the anterior cruciate ligament: a meta-analysis. *Knee Surg Sports Traumatol Arthrosc.* 2014;22(1):53-65.
- ✓ Kessler MA, Behrend H, Henz S, Stutz G, Rukavina A, Kuster MS (2008) Function, osteoarthritis and activity after ACL-rupture: 11 years follow-up results of conservative versus reconstructive treatment. *Knee Surg Sports Traumatol Arthrosc* 16:442–448
- ✓ Arendt EA (2001) Anterior cruciate ligament injuries. *Curr Women's Health Rep* 1:211–217
- ✓ Fridén T, Jonsson A, Erlandsson T, Jonsson K, Lindstrand A (1993) Effect of femoral condyle configuration on disability after an anterior cruciate ligament rupture. 100 patients followed for 5 years. *Acta Orthop Scand* 64:571–574
- ✓ Christensen JJ, Krych AJ, Engasser WM, Vanhees MK, Collins MS, Dahm DL. Lateral tibial posterior slope is increased in patients with early graft failure after anterior cruciate ligament reconstruction. *Am J Sports Med.* 2015;43(10):2510-2514.
- ✓ Napier RJ, Garcia E, Devitt BM, Feller JA, Webster KE. Increased Radiographic Posterior Tibial Slope Is Associated With Subsequent Injury Following Revision Anterior Cruciate Ligament Reconstruction. *Orthop J Sports Med.* 2019;7(11):2325967119879373. Published 2019 Nov 5.
- ✓ Voos JE, Suero EM, Citak M, et al. Effect of tibial slope on the stability of the anterior cruciate ligament-deficient knee. *Knee Surg Sports Traumatol Arthrosc.* 2012;20(8):1626-1631.
- ✓ Dejour D, Saffarini M, Demey G, Baverel L. Tibial slope correction combined with second revision ACL produces good knee stability and prevents graft rupture. *Knee Surg Sports Traumatol Arthrosc.* 2015;23(10):2846-2852.
- ✓ Hees T, Petersen W. Anterior Closing-Wedge Osteotomy for Posterior Slope Correction. *Arthrosc Tech.* 2018;7(11):e1079-e1087.
- ✓ Bernholt DL, Kennedy MI, Crawford MD, DePhillipo NN, LaPrade RF. Combined Anterior Cruciate Ligament Reconstruction and Lateral Extra-Articular Tenodesis. *Arthrosc Tech.* 2019;8(8):e855-e859. Published 2019 Jul 19.
- ✓ Webb JM, Salmon LJ, Leclerc E, Pinczewski LA, Roe JP. Posterior tibial slope and further anterior cruciate ligament injuries in the anterior cruciate ligament-reconstructed patient. *Am J Sports Med.* 2013;41(12):2800-2804.
- ✓ Jesani S, Getgood A. Modified Lemaire Lateral Extra-Articular Tenodesis Augmentation of Anterior Cruciate Ligament Reconstruction. *JBSJ Essent Surg Tech.* 2019;9(4):e41.1-7.
- ✓ Joseph L, Demey G, Chamu T, et al. Adding a modified Lemaire procedure to ACLR in knees with severe rotational knee instability does not compromise isokinetic muscle recovery at the time of return-to-play. *J Exp Orthop.* 2020;7(1):84. Published 2020 Oct 30.
- Williams A, Ball S, Stephen J, White N, Jones M, Amis A. The scientific rationale for lateral tenodesis augmentation of intra-articular ACL reconstruction using a modified 'Lemaire' procedure. *Knee Surg Sports Traumatol Arthrosc.* 2017;25(4):1339-1344.
- ✓ Williams A, Ball S, Stephen J, White N, Jones M, Amis A. The scientific rationale for lateral tenodesis augmentation of intra-articular ACL reconstruction using a modified 'Lemaire' procedure. *Knee Surg Sports Traumatol Arthrosc.* 2017;25(4):1339-1344.
- ✓ Kennedy MI, LaPrade CM, Geeslin AG, LaPrade RF. An Overview of Clinically Relevant Biomechanics of the Anterolateral Structures of the Knee. *Tech Orthop.* 2018;33(4):213-218.
- j
- ✓ DePhillipo NN, Cinque ME, Chahla J, Geeslin AG, LaPrade RF. Anterolateral Ligament Reconstruction Techniques, Biomechanics, and Clinical Outcomes: A Systematic Review. *Arthroscopy.* 2017;33(8):1575-1583.

- ✓ Dodds AL, Halewood C, Gupte CM, Williams A, Amis AA. The anterolateral ligament: Anatomy, length changes and association with the Segond fracture. *Bone Joint J.* 2014;96-B(3):325-331.
- ✓ Lemaire M: Ruptures anciennes du ligament croise anterieur du genou. *J Chir (Paris)* 93: 311-20, 1967.
- ✓ Losee RE, Johnson TR, Southwick WÖ: Anterior subluxation of the lateral tibial plateau. A diagnostic test and operative repair. *J Bone Joint Surg Am* 60: 1015-30,1978
- ✓ Ellison AE: Distal iliotibial-band transfer for anterolateral rotatory instability of the knee. *J Bone Joint Surg Am* 61: 330-7, 1979
- ✓ Ireland J, Trickey EL: Macintosh tenodesis for anterolateral instability of the knee. *J Bone Joint Surg Br* 62: 340-5, 1980.
- ✓ Andrews JR, Sanders R: A "mini-reconstruction" technique in treating anterolateral rotatory instability (ALRI). *Clin Orthop Relat Res*: 93-6, 1983
- ✓ Duthon VB, Magnussen RA, Servien E, Neyret P. ACL reconstruction and extra-articular tenodesis. *Clin Sports Med.* 2013;32(1):141-153
- ✓ Hiroshima Y, Hoshino Y, Miyaji N, et al. No difference in postoperative rotational laxity after ACL reconstruction in patients with and without anterolateral capsule injury: quantitative evaluation of the pivot-shift test at 1-year follow-up. *Knee Surg Sports Traumatol Arthrosc.* 2020;28(2):489-494.
- ✓ Sheean AJ, Shin J, Patel NK, Lian J, Guenther D, Musahl V. The Anterolateral Ligament is Not the Whole Story: Reconsidering the Form and Function of the Anterolateral Knee and its Contribution to Rotatory Knee Instability. *Tech Orthop.* 2018;33(4):219-224
- ✓ Dejour D, Pungitore M, Valluy J, Nover L, Saffarini M, Demey G. Tibial slope and medial meniscectomy significantly influence short-term knee laxity following ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc.* 2019;27(11):3481-3489.
- ✓ Bernhardson AS, Aman ZS, Dornan GJ, et al. Tibial Slope and Its Effect on Force in Anterior Cruciate Ligament Grafts: Anterior Cruciate Ligament Force Increases Linearly as Posterior Tibial Slope Increases. *Am J Sports Med.* 2019;47(2):296-302.
- ✓ Bargagliotti, Marco & Benazzo, Francesco & Bellemans, Johan & Truijen, Jan & Pietrobono, Luigi & Formagnana, Mario & Zero, Enrico & Zanon, Giacomo. (2020). The Role of the Posterolateral Tibial Slope in the Rotational Instability of the Knee in Patients Affected by a Complete Isolated Anterior Cruciate Ligament Injury: Its Value in the Decision-Making Process during the Anterolateral Ligament Reconstruction. *Joints.* 10.1055/s-0040-1710386.
- ✓ Rahnemai-Azar AA, Abebe ES, Johnson P, et al. Increased lateral tibial slope predicts high-grade rotatory knee laxity pre-operatively in ACL reconstruction. *Knee Surg Sports Traumatol Arthrosc.* 2017;25(4):1170-1176.
- ✓ Bayer S, Meredith SJ, Wilson KW, et al. Knee Morphological Risk Factors for Anterior Cruciate Ligament Injury: A Systematic Review. *J Bone Joint Surg Am.* 2020;102(8):703-718.
- ✓ Frederick Azar S. Terry Canale James Beaty. *Campbell's Operative Orthopaedics, 4-Volume Set.* Elsevier, 14th December 2020
- ✓ W Norman Scott; David R Diduch; Richard Iorio; William J Long. *Insall & Scott surgery of the knee.* Philadelphia, PA : Elsevier, [2018]
- ✓ Hoshino Y, Araujo P, Ahlden M, et al. Standardized pivot shift test improves measurement accuracy. *Knee Surg Sports Traumatol Arthrosc.* 2012;20(4):732-736.
- ✓ Jakob RP, Stäubli HU, Deland JT. Grading the pivot shift. Objective tests with implications for treatment. *J Bone Joint Surg Br.* 1987;69(2):294-299.

- ✓ Musahl V, Hoshino Y, Ahlden M, et al. The pivot shift: a global user guide [published correction appears in *Knee Surg Sports Traumatol Arthrosc.* 2013 Mar;21(3):749]. *Knee Surg Sports Traumatol Arthrosc.* 2012;20(4):724-731.
- ✓ Florescu, S., Vermesan, D., Haragus, H. et al. Cross-cultural adaptation and validation of the Romanian knee disability and osteoarthritis outcome score for joint replacement (KOOSJR). *BMC Musculoskelet Disord* 21, 155 (2020)
- ✓ <https://clincalc.com/stats/samplesize.aspx>

## 5. PLANNINGUL PREOPERATOR SI REZULTATELE POSTOPERATORII SI IN TIMP IN ENDOPROTEZAREA GENUNCHIULUI

### BIBLIOGRAFIE:

- ✓ Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ 1.OECD. Hip and knee replacement. In: OECD, editor. *Health at a Glance 2015*: OECD Publishing; 2015. pp. 112–113. [https://doi.org/10.1787/health\\_glance-2015-36-en](https://doi.org/10.1787/health_glance-2015-36-en)
- ✓ 2.Pivec R, Johnson AJ, Mears SC, Mont MA. Hip arthroplasty. *The Lancet.* 2012; 380: 1768–1777.
- ✓ View ArticleGoogle Scholar
- ✓ 3.Kurtz SM, Ong KL, Schmier J, Mowat F, Saleh K, Dybvik E, et al. Future clinical and economic impact of revision total hip and knee arthroplasty. *J Bone Joint Surg Am.* 2007; 89 Suppl 3: 144–151. pmid:17908880
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 4.Patil S, Garbuz DS, Greidanus NV, Masri BA, Duncan CP. Quality of life outcomes in revision vs primary total hip arthroplasty. A prospective cohort study. *J Arthroplasty.* 2008; 23: 550–553. pmid:18514873
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 5.Vanhegan IS, Malik AK, Jayakumar P, UI Islam S, Haddad FS. A financial analysis of revision hip arthroplasty. The economic burden in relation to the national tariff. *J Bone Joint Surg Br.* 2012; 94: 619–623. pmid:22529080
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 6.Maloney WJ. National Joint Replacement Registries. Has the time come. *J Bone Joint Surg Am.* 2001; 83-A: 1582–1585. pmid:11679613
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 7.MacInnes SJ, Gordon A, Wilkinson MJ. Risk Factors for Aseptic Loosening Following Total Hip Arthroplasty. In: Fokter S, editor. *Recent Advances in Arthroplasty: InTech*; 2012.
- ✓ View ArticleGoogle Scholar
- ✓ 8.Pedersen DR, Callaghan JJ, Brown TD. Activity-dependence of the "safe zone" for impingement versus dislocation avoidance. *Med Eng Phys.* 2005; 27: 323–328. pmid:15823473
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 9.Hsu J, La Fuente Md, Radermacher K. Multi-Dimensional Range-of-Motion-Based Safe Zone for Patient-Specific Total Hip Arthroplasty. In: Radermacher K, Baena FRY, editors. *CAOS 2017. 17th Annual Meeting of the International Society for Computer Assisted Orthopaedic Surgery: EasyChair*; 2017. pp. 175–180.
- ✓ 10.Bergmann G, Bender A, Dymke J, Duda G, Damm P. Standardized Loads Acting in Hip Implants. *PLoS One.* 2016; 11: e0155612. pmid:27195789

- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 11.Mellon SJ, Grammatopoulos G, Andersen MS, Pandit HG, Gill HS, Murray DW. Optimal acetabular component orientation estimated using edge-loading and impingement risk in patients with metal-on-metal hip resurfacing arthroplasty. *Journal of Biomechanics*. 2015; 48: 318–323. pmid:25482661
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 12.Pierrepont JW, Stambouzou CZ, Miles BP, O'Connor PB, Walter L, Ellis A, et al. Patient Specific Component Alignment in Total Hip Arthroplasty. *JISRF*. 2016; 6.
- ✓ View ArticleGoogle Scholar
- ✓ 13.Stops A, Wilcox R, Jin Z. Computational modelling of the natural hip: a review of finite element and multibody simulations. *Comput Methods Biomech Biomed Engin*. 2012; 15: 963–979. pmid:21574077
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 14.Eschweiler J, Fieten L, Dell'Anna J, Kabir K, Gravius S, Tingart M, et al. Application and evaluation of biomechanical models and scores for the planning of total hip arthroplasty. *Proc Inst Mech Eng H*. 2012; 226: 955–967. pmid:23636959
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 15.Kinney AL, Besier TF, D'Lima DD, Fregly BJ. Update on grand challenge competition to predict in vivo knee loads. *J Biomech Eng*. 2013; 135: 21012. pmid:23445057
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 16.Hicks JL, Uchida TK, Seth A, Rajagopal A, Delp SL. Is my model good enough? Best practices for verification and validation of musculoskeletal models and simulations of movement. *J Biomech Eng*. 2015; 137: 20905. pmid:25474098
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 17.Damm P, Graichen F, Rohlmann A, Bender A, Bergmann G. Total hip joint prosthesis for in vivo measurement of forces and moments. *Med Eng Phys*. 2010; 32: 95–100. pmid:19889565
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 18.Heller MO, Bergmann G, Deuretzbacher G, Dürselen L, Pohl M, Claes L, et al. Musculoskeletal loading conditions at the hip during walking and stair climbing. *Journal of Biomechanics*. 2001; 34: 883–893. pmid:11410172
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 19.Stansfield BW, Nicol AC, Paul JP, Kelly IG, Graichen F, Bergmann G. Direct comparison of calculated hip joint contact forces with those measured using instrumented implants. An evaluation of a three-dimensional mathematical model of the lower limb. *Journal of Biomechanics*. 2003; 36: 929–936. pmid:12757801
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 20.Modenese L, Phillips ATM, Bull AMJ. An open source lower limb model: Hip joint validation. *Journal of Biomechanics*. 2011; 44: 2185–2193. pmid:21742331
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 21.Zhang X, Chen Z, Wang L, Yang W, Li D, Jin Z. Prediction of hip joint load and translation using musculoskeletal modelling with force-dependent kinematics and experimental validation. *Proc Inst Mech Eng H*. 2015; 229: 477–490. pmid:26063118
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 22.Bergmann G, Deuretzbacher G, Heller M, Graichen F, Rohlmann A, Strauss J, et al. Hip contact forces and gait patterns from routine activities. *Journal of Biomechanics*. 2001; 34: 859–871. pmid:11410170
- ✓ View ArticlePubMed/NCBIGoogle Scholar

- ✓ 23. Morlock M, Schneider E, Bluhm A, Vollmer M, Bergmann G, Müller V, et al. Duration and frequency of every day activities in total hip patients. *Journal of Biomechanics*. 2001; 34: 873–881. pmid:11410171
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 24. Babisch J, Layher F, Ritter B, Venbrocks RA. Computer-assisted Biomechanically Based Two-dimensional Planning of Hip Surgery: Translation from Orthopädische Praxis. 2001; 37.
- ✓ View ArticleGoogle Scholar
- ✓ 25. Babisch J, Layher F, Venbrocks RA. Computer-Assisted Planning and Navigation of Total Hip Arthroplasty Using the Navitrack and mediCAD System. In: Stiehl JB, Konermann WH, Haaker RG, editors. *Navigation and robotics in total joint and spine surgery*. Berlin, Heidelberg: Springer; 2013. pp. 82–89. [https://doi.org/10.1007/978-3-642-59290-4\\_10](https://doi.org/10.1007/978-3-642-59290-4_10)
- ✓ 26. Johnston RC, Brand RA, Crowninshield RD. Reconstruction of the hip. A mathematical approach to determine optimum geometric relationships. *J Bone Joint Surg Am*. 1979; 61: 639–652. pmid:457709
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 27. Bonnin MP, Archbold PHA, Basiglini L, Selmi TA, Beverland DE. Should the acetabular cup be medialised in total hip arthroplasty. *Hip Int*. 2011; 21: 428–435. pmid:21818743
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 28. Winter DA. *Biomechanics and motor control of human movement*. 4th ed. New York, N.Y. [etc.]: Wiley; 2009.
- ✓ 29. Damsgaard M, Rasmussen J, Christensen ST, Surma E, de Zee M. Analysis of musculoskeletal systems in the AnyBody Modeling System. *Simulation Modelling Practice and Theory*. 2006; 14: 1100–1111.
- ✓ View ArticleGoogle Scholar
- ✓ 30. Crowninshield RD, Brand RA. A physiologically based criterion of muscle force prediction in locomotion. *Journal of Biomechanics*. 1981; 14: 793–801. pmid:7334039
- ✓ View ArticlePubMed/NCBIGoogle Scholar
- ✓ 31. Della Valle AG, Padgett DE, Salvati EA. Preoperative planning for primary total hip arthroplasty. *J Am Acad Orthop Surg* 2005;13:455–462. [PubMed] [Google Scholar]
- ✓ 32. Scheerlinck T. Primary hip arthroplasty templating on standard radiographs: a stepwise approach. *Acta Orthop Belg* 2010;76:432–442. [PubMed] [Google Scholar]
- ✓ 33. Knight JL, Atwater RD. Preoperative planning for total hip arthroplasty: quantitating its utility and precision. *J Arthroplasty* 1992;7:403–409. [PubMed] [Google Scholar]
- ✓ 34. Conn KS, Clarke MT, Hallett JP. A simple guide to determine the magnification of radiographs and to improve the accuracy of preoperative templating. *J Bone Joint Surg Br* 2002;84:269–272. [PubMed] [Google Scholar]
- ✓ 35. Yoon YS, Hodgson AJ, Tonetti J, Masri BA, Duncan CP. Resolving inconsistencies in defining the target orientation for the acetabular cup angles in total hip arthroplasty. *Clin Biomech (Bristol, Avon)* 2008;23:253–259. [PubMed] [Google Scholar]
- ✓ 36. Petretta R, Strelzow J, Ohly NE, Misur P, Masri BA. Acetate templating on digital images is more accurate than computer-based templating for total hip arthroplasty. *Clin Orthop Relat Res* 2015;473:3752–3759. [PMC free article] [PubMed] [Google Scholar]
- ✓ 37. Stigler SK, Müller FJ, Pfau S, Zellner M, Füchtmeier B. Digital templating in total hip arthroplasty: additional anteroposterior hip view increases the accuracy. *World J Orthop* 2017;8:30–35. [PMC free article] [PubMed] [Google Scholar]
- ✓ 38. Shaarani SR, McHugh G, Collins DA. Accuracy of digital preoperative templating in 100 consecutive uncemented total hip arthroplasties: a single surgeon series. *J Arthroplasty* 2013;28:331–337. [PubMed] [Google Scholar]

- ✓ 39. Wako Y, Nakamura J, Miura M, Kawarai Y, Sugano M, Nawata K. Interobserver and intraobserver reliability of three-dimensional preoperative planning software in total hip arthroplasty. *J Arthroplasty* 2018;33:601–607. [PubMed] [Google Scholar]
- ✓ 40. Viceconti M, Lattanzi R, Antonietti B, et al. CT-based surgical planning software improves the accuracy of total hip replacement preoperative planning. *Med Eng Phys* 2003;25:371–377. [PubMed] [Google Scholar]
- ✓ 41. Osmani FA, Thakkar S, Ramme A, Elbuluk A, Wojack P, Vigdorich JM. Variance in predicted cup size by 2-dimensional vs 3-dimensional computerized tomography-based templating in primary total hip arthroplasty. *Arthroplast Today* 2017;3:289–293. [PMC free article] [PubMed] [Google Scholar]
- ✓ 42. Kuroda K, Kabata T, Maeda T, et al. The value of computed tomography based navigation in revision total hip arthroplasty. *Int Orthop* 2014;38:711–716. [PMC free article] [PubMed] [Google Scholar]
- ✓ 43. Kanawade V, Dorr LD, Banks SA, Zhang Z, Wan Z. Precision of robotic guided instrumentation for acetabular component positioning. *J Arthroplasty* 2015;30:392–397. [PubMed] [Google Scholar]
- ✓ 44. Nakahara I, Kyo T, Kuroda Y, Miki H. Effect of improved navigation performance on the accuracy of implant placement in total hip arthroplasty with a CT-based navigation system. *J Artif Organs* 2018;21:340–347. [PubMed] [Google Scholar]
- ✓ 45. Kuroda Y, Akiyama H, Nankaku M, So K, Goto K, Matsuda S. A report on three consecutive cases using computer tomography 3D preoperative planning for conversion of arthrodesed hips to total hip replacements. *HSS J* 2015;11:76–83. [PMC free article] [PubMed] [Google Scholar]
- ✓ 46. Snijders TE, Willemsen K, van Gaalen SM, Castelein RM, Weinans H, de Gast A. Lack of consensus on optimal acetabular cup orientation because of variation in assessment methods in total hip arthroplasty: a systematic review. *Hip Int* 2019;29:41–50. [PubMed] [Google Scholar]
- ✓ 47. Rivière C, Lazic S, Villet L, Wiart Y, Muirhead Allwood S, Cobb J. Kinematic alignment technique for total hip and knee arthroplasty: the personalized implant positioning surgery. *EFORT Open Rev* 2018;3:98–105. [PMC free article] [PubMed] [Google Scholar]
- ✓ 48. Rivière C, Lazic S, Dagneaux L, Van Der Straeten C, Cobb J, Muirhead-Allwood S. Spine–hip relations in patients with hip osteoarthritis. *EFORT Open Rev* 2018;3:39–44. [PMC free article] [PubMed] [Google Scholar]
- ✓ 49. Beverland D. The transverse acetabular ligament optimizing version. *Orthopedics* 2010;33(9):631. [PubMed] [Google Scholar]
- ✓ 50. Beverland DE, O’Neill CKJ, Rutherford M, Molloy D, Hill JC. Placement of the acetabular component. *Bone Joint J* 2016;98-B:37–43. [PubMed] [Google Scholar]
- ✓ 51. Cram P, Lu X, Kates SL, Singh JA, Li Y, Wolf BR: Total knee arthroplasty volume, utilization, and outcomes among Medicare beneficiaries, 1991-2010. *JAMA* 2012;308(12):1227-1236.
- ✓ 52. Kurtz S, Ong K, Lau E, Mowat F, Halpern M: Projections of primary and revision hip and knee arthroplasty in the United States from 2005 to 2030. *J Bone Joint Surg Am* 2007;89(4):780-785.
- ✓ 53. Bozic KJ, Kurtz SM, Lau E, et al: The epidemiology of revision total knee arthroplasty in the United States. *Clin Orthop Relat Res* 2010;468(1):45-51.
- ✓ 54. Kniesel B, Konstantinidis L, Hirschmüller A, Südkamp N, Helwig P: Digital templating in total knee and hip replacement: An analysis of planning accuracy. *Int Orthop* 2014;38(4):733-739.

- ✓ 55. Belmont PJ Jr, Goodman GP, Waterman BR, Bader JO, Schoenfeld AJ: Thirty-day postoperative complications and mortality following total knee arthroplasty: Incidence and risk factors among a national sample of 15,321 patients. *J Bone Joint Surg Am* 2014;96(1):20-26
- ✓ 56. Macaulay W, Geller JA, Brown AR, Cote LJ, Kiernan HA: Total knee arthroplasty and Parkinson disease: Enhancing outcomes and avoiding complications. *J Am Acad Orthop Surg* 2010;18(11):687-694.
- ✓ 57. Mullaji A, Shetty GM: Persistent hindfoot valgus causes lateral deviation of weightbearing axis after total knee arthroplasty. *Clin Orthop Relat Res* 2011;469(4):1154-1160
- ✓ 58. Garbedian S, Sternheim A, Backstein D: Wound healing problems in total knee arthroplasty. *Orthopedics* 2011;34(9):e516-e518.
- ✓ 59. Gandhi R, de Beer J, Leone J, Petruccioli D, Winemaker M, Adili A: Predictive risk factors for stiff knees in total knee arthroplasty. *J Arthroplasty* 2006;21(1):46-52
- ✓ 60. Fehring TK, Odum S, Griffin WL, Mason JB, Nadaud M: Early failures in total knee arthroplasty. *Clin Orthop Relat Res* 2001;392:315-318.
- ✓ 61. Tanzer M, Miller J: The natural history of flexion contracture in total knee arthroplasty: A prospective study. *Clin Orthop Relat Res* 1989;248:129-134.
- ✓ 62. Quah C, Swamy G, Lewis J, Kendrew J, Badhe N: Fixed flexion deformity following total knee arthroplasty: A prospective study of the natural history. *Knee* 2012;19(5):519-521.
- ✓ 63. Malo M, Vince KG: The unstable patella after total knee arthroplasty: Etiology, prevention, and management. *J Am Acad Orthop Surg* 2003;11(5):364-371.
- ✓ 64. Merican AM, Ghosh KM, Baena FR, Deehan DJ, Amis AA: Patellar thickness and lateral retinacular release affect patellofemoral kinematics in total knee arthroplasty. *Knee Surg Sports Traumatol Arthrosc* 2014;22(3):526-533.
- ✓ 64. Bae DK, Song SJ, Yoon KH, Noh JH, Moon SC: Comparative study of tibial posterior slope angle following cruciate-retaining total knee arthroplasty using one of three implants. *Int Orthop* 2012;36(4):755-760.
- ✓ 66. Singh G, Tan JH, Sng BY, Awiszus F, Lohmann CH, Nathan SS: Restoring the anatomical tibial slope and limb axis may maximise post-operative flexion in posterior-stabilised total knee replacements. *Bone Joint J* 2013;95-B(10):1354-1358

## **6. Artroplastia de sold - eficacitatea blocului de fascie iliaca in terapia analgetica ca masura postoperatorie de imbunatatire a evolutiei pacientului**

### **Bibliografie:**

- ✓ (0) Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ (1) Fischer HBJ, Simanski CJP. A procedure-specific systematic review and consensus recommendations for analgesia after total hip replacement. *Anaesthesia* 2005; 60: 1189–202
- ✓ (2) Süleyman Deniz, Abdulkadir Atım, Mustafa Kürklü, Tuncer Çaycı, Ercan Kurt.
- ✓ -Pub -Med.gov 2014. Comparison of the postoperative analgesic efficacy of an ultrasound-guided fascia iliaca compartment block versus 3 in 1 block in hip prosthesis surgery .

- ✓ (3) Seunguk Bang, Jihyun Chung, Jaejung Jeong, Hahyeon Bak, Dongjiu Kim. Pub –Med.gov–Sept 2016 Efficacy of ultrasound-guided fascia iliaca compartment block after hip hemiarthroplasty: A prospective, randomized trial.
- ✓ (4) Wenli Dai, Xi Leng, Xiaoqing Hu, Jin Cheng, Yingfang Ao. The effect of fascia iliaca block on postoperative pain and analgesic consumption for patients undergoing primary total hip arthroplasty: a meta-analysis of randomized controlled trials Meta-Analysis J Orthop Surg Res 2021 Jul 9;
- ✓ (5) John-Rudolph H Smith 1, Matthew J Kraeutler, Laura E Keeling, Anthony J Scillia 2, Eric C McCarty Omer Mei-Dan Fascia Iliaca Block for Postoperative Pain Control After Hip Arthroscopy: A Systematic Review of Randomized Controlled Trials. Am J Sports Med. 2021 Dec
- ✓ (6) Xiao-yan Zhang & Jian-bao Ma. The efficacy of fascia iliaca compartment block for pain control after total hip arthroplasty: a meta-analysis. Journal of Orthopaedic Surgery and Research volume 14, Article number: 33 (2019)
- ✓ (7) Wenli Dai, Xi Leng, Xiaoqing Hu, Jin Cheng & Yingfang Ao. The effect of fascia iliaca block on postoperative pain and analgesic consumption for patients undergoing primary total hip arthroplasty: a meta-analysis of randomized controlled trials. Journal of Orthopaedic Surgery and Research volume 16, Article number: 444 (2021) Jamie-Lee Metesky, Junping Chen, Meg Rosenblatt
- ✓ (8) Jamie-Lee Metesky, Junping Chen, Meg Rosenblatt, Anesthesia Department, Mount Sinai St. Luke's and West Hospitals, New York, NY 10019, United States. Enhanced recovery after surgery pathway: The use of fascia iliaca blocks causes delayed ambulation after total hip arthroplasty. World J Anesthesiol 2019;
- ✓ (9) Kamil Bober, MD, Allen Kadado, MD, Michael Charters, MD, Ayooluwa Ayoola, BS Trevor North, MD. Pain Control After Total Hip Arthroplasty: A Randomized Controlled Trial Determining Efficacy of Fascia Iliaca Compartment Blocks in the Immediate Postoperative Period. The Journal of Arthroplasty- PRIMARY HIP | VOLUME 35, ISSUE 6, SUPPLEMENT, JUNE 01, 2020.
- ✓ (10) Desmet M, Vermeylen K, Van Herreweghe I. A longitudinal supra-inguinal fascia iliaca compartment block reduces morphine consumption after total hip arthroplasty. Reg Anesth Pain Med. 2017.
- ✓ (11) Vermeylen K, Matthias D, Leunen I. Supra-inguinal injection for fascia iliaca compartment block results in more consistent spread towards the lumbar plexus than an infra-inguinal injection: a volunteer study. Reg Anesth Pain Med. 2019.
- ✓ (12) Guay J, Parker MJ, Griffiths R, Kopp SL. Peripheral nerve blocks for hip fractures: a Cochrane Review. Anesth Analg. 2018. A Cochrane review which focuses on peripheral nerve blocks for pre or post-operative analgesia for hip fracture surgery.
- ✓ (13) Steenberg J, Moller AM. Systemic review of the effects of fascia iliaca compartment block on hip fracture patients before operation. Br J Anaesth. 2018. Systematic review of FICB, which concludes it as a relatively safe and effective supplement in perioperative pain management of hip fracture patients.
- ✓ (14) Fujihara Y, Fukunishi S, Niship S, Miura J, Koyanagi S, Yoshiya S. Fascia iliaca compartment block: its efficacy in pain control for patients with proximal femoral fracture. J Orthop Sci. 2013;
- ✓ (15) Callear J, Shah K. Analgesia in hip fractures. Do fascia-iliac blocks make any difference? BMJ Qual Improv Rep. 2016.
- ✓ (16) Morrison RS, Dickman E, Hwang U. Regional nerve blocks improve pain and functional outcomes in hip fracture: a randomized control trial. J Am Geriatr Soc. 2016. RCT

comparing outcomes of regional nerve block with that of standard analgesics after hip fracture.

- ✓ (17) Steenberg J.Møller A.M. Systematic review of the effects of fascia iliaca compartment block on hip fracture patients before operation. *Br J Anaesth.* 2018.

## **7. Planningul preoperator intre algoritmi standard si particularitati de caz in artroplastia totala de sold**

Bibliografie:

- ✓ (0) Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ (1) Campbell's Operative Orthopaedics, Frederick M. Azar, MD (Professor Department of Orthopaedic Surgery and Biomedical Engineering University of Tennessee–Campbell Clinic Chief of Staff, Campbell Clinic Memphis, Tennessee) James H. Beaty, MD (Harold B. Boyd Professor and Chair Department of Orthopaedic Surgery and Biomedical Engineering University of Tennessee–Campbell Clinic Memphis, Tennessee) Kay Daugherty and Linda Jones (Editorial Assistance) 14th edition 2021.
- ✓ (2) Blackley HR, Howell GE, Rorabeck CH. Planning and management of the difficult primary hip replacement: preoperative planning and technical considerations. *Instr Course Lect.* 2000;49:3–11.
- ✓ (3) Davila JA, Kransdorf MJ, Duffy GP. Surgical planning of total hip arthroplasty: accuracy of computer-assisted EndoMap software in predicting component size. *Skeletal Radiol.* 2006;35:390–393.
- ✓ (4) Skoldenberg OG, Boden HS, Salemyr MO, et al. Periprosthetic proximal bone loss after uncemented hip arthroplasty is related to stem size: DXA measurements in 138 patients followed for 2-7 years. *Acta Orthop* 2006;77:386-92.
- ✓ (5) Maloney WJ, Keeney JA. Leg length discrepancy after total hip arthroplasty. *J Arthroplasty* 2004;19:108-10.
- ✓ (6) Conn KS, Clarke MT, Hallett JP. A simple guide to determine the magnification of radiographs and to improve the accuracy of preoperative templating. *J Bone Joint Surg Br* 2002; 84-B:269-72.
- ✓ (7) Oddy MJ, Jones MJ, Pendegrass CJ, et al. Assessment of reproducibility and accuracy in templating hybrid total hip arthroplasty using digital radiographs. *J Bone Joint Surg Br* 2006;88:581-5.
- ✓ (8) Bono JV. Digital templating in total hip arthroplasty. *J Bone Joint Surg Am* 2004; 86-A:118-22.
- ✓ (9) Wimsey S, Pickard R, Shaw G. Accurate scaling of digital radiographs of the pelvis. A prospective trial of two methods. *J Bone. Joint Surg Br* 2006;88:1508-12.
- ✓ (10) Crooijmans HJ, Laumen AM, van Pul C, van Mourik JB. A new digital preoperative planning method for total hip arthroplasties. *Clin Orthop Relat Res.* 2009;467:909-16.
- ✓ (11) Iorio R, Siegel J, Specht LM, Tilzey JF, Hartman A, Healy WL. A comparison of acetate vs digital templating for preoperative planning of total hip arthroplasty: is digital templating accurate and safe? *J Arthroplasty.* 2009;24:175-9.
- ✓ (12) Suh KT, Cheon SJ, Kim DW. Comparison of preoperative templating with postoperative assessment in cementless total hip arthroplasty. *Acta Orthop Scand.* 2004;75:40-4.

- ✓ (13) Unnanuntana A, Wagner D, Goodman SB. The accuracy of preoperative templating in cementless total hip arthroplasty. *J Arthroplasty*. 2009;24:180-6.
- ✓ (14) Archibeck MJ, Cummins T, Tripuraneni KR, et al. Inaccuracies in the use of magnification markers in digital hip radiographs. *Clin Orthop Relat Res*. 2016;474:1812-7.
- ✓ (15) Charles MN, Bourne RB, Davey JR, Greenwald AS, Morrey BF, Rorabeck CH. Soft-tissue balancing of the hip: the role of femoral offset restoration. *Instr Course Lect*. 2005;54:131-41.
- ✓ (16) Gamble P, de Beer J, Petruccelli D, Winemaker M. The accuracy of digital templating in uncemented total hip arthroplasty. *J Arthroplasty*. 2010;25:529-32.
- ✓ (17) González Della Valle A, Comba F, Taveras N, Salvati EA. The utility and precision of analogue and digital preoperative planning for total hip arthroplasty. *Int Orthop*. 2008;32:289-94.
- ✓ (18) The B, Diercks RL, van Ooijen PM, van Horn JR. Comparison of analog and digital preoperative planning in total hip and knee arthroplasties. A prospective study of 173 hips [www.hipandpelvis.or.kr](http://www.hipandpelvis.or.kr)
- ✓ (19) Kim MS, Jeong MC, Ji NG, Lee JS, Kim JI, Suh KT. Preoperative templating in PACS for total hip replacement. *J Korean Orthop Assoc*. 2011;46:472-7.
- ✓ (20) Kosashvili Y, Shasha N, Olschewski E, Safir O, White L, Gross A, et al. Digital versus conventional templating techniques in preoperative planning for total hip arthroplasty. *Can J Surg* 2009;52:6e11.
- ✓ (21) Shaarani SR, McHugh G, Collins DA. Accuracy of digital preoperative templating in 100 consecutive uncemented total hip arthroplasties: a single surgeon series. *J Arthroplasty* 2013;28:331e7.
- ✓ (22) Holzer LA, Scholler G, Wagner S, Friesenbichler J, Maurer-Ertl W, Leithner A. The accuracy of digital templating in uncemented total hip arthroplasty. *Arch Orthop Trauma Surg* 2019;139:263e8.
- ✓ (23) Ries MD. CORR Insights: acetate templating on digital images is more accurate than computer-based templating for total hip arthroplasty. *Clin Orthop Relat Res* 2015;473:3760e1.
- ✓ (24) Petretta R, Strelzow J, Ohly NE, Misur P, Masri BA. Acetate templating on digital images is more accurate than computer-based templating for total hip arthroplasty. *Clin Orthop Relat Res* 015;473:3752e9.
- ✓ (25) Shin JK, Son SM, Kim TW, Shin WC, Lee JS, Suh KT. Accuracy and reliability of preoperative on-screen templating using digital radiographs for total hip arthroplasty. *Hip Pelvis* 2016;28:201e7.
- ✓ (26) Wang Q, Xiao J, Zhu L, Zhao X, Liu Z, Wang J, et al. Acetate templating on calibrated standing digital radiograph improves accuracy of preoperative templating for total hip arthroplasty. *Orthop Traumatol Surg Res* 2017;103: 341e7.
- ✓ (27) Boddu K, Siebachmeyer M, Lakkol S, Rajayogeswaran B, Kavarthapu V, Li PLS. Predicting the underestimation of the femoral offset in anteroposterior radiographs of the pelvis using 'lesser trochanter index': a 3D CT derived simulated radiographic analysis. *J Arthroplasty* 2014;29:1278e84.
- ✓ (28) Efe T, El Zayat BF, Heyse TJ, Timmesfeld N, Fuchs-Winkelmann S, Schmitt J. Precision of preoperative digital templating in total hip arthroplasty. *Acta OrthopBelg* 2011;77:616–21.
- ✓ (29) White SP, Bainbridge J, Smith EJ. Assessment of magnification of digital pelviceradiographs in total hip arthroplasty using templating software. *Ann R Coll Surg Engl* 2008;90:592–6.

- ✓ (30) Sinclair VF, Wilson J, Jain NP, Knowles D. Assessment of accuracy of marker ballplacement in preoperative templating for total hip arthroplasty. *J Arthroplasty* 2014;29:1658–60.
- ✓ (31) Riddick A, Smith A, Thomas DP. Accuracy of preoperative templating in total hip arthroplasty. *J Orthop Surg* 2014;22:173–6.
- ✓ (31) Lim YW, Chang YJ, Kwon SY, Kim YS. A simple method using a PACS to mini-mize leg length discrepancy in primary THA: a method to minimize leg length discrepancy. *J Arthroplasty* 2013;28:1791–5.
- ✓ (32) Brown NM, Foran JR, Della Valle CJ. Hip resurfacing and conventional THA: comparison of acetabular bone stock removal, leg length, and offset. *Orthopedics* 2013;36:e637–41.
- ✓ (34) von Roth P, Perka C, Mayr HO, Preininger B, Ziebula F, Matziolis G, et al. Reproducibility of femoral offset following short stem and straight stem total hip arthroplasty. *Orthopedics* 2014;37:e678–84.
- ✓ (35) Argenson JN, Flecher X, Parratte S, Aubaniac JM. Anatomy of the dysplastic hip and consequences for total hip arthroplasty. *Clin Orthop Relat Res*, 2007, 465: 40–45.
- ✓ (36) Kosuge D, Yamada N, Azegami S, Achan P, Ramachandran M. Management of developmental dysplasia of the hip in young adults: current concepts. *Bone Joint J*, 2013, 95: 732–737.
- ✓ (37) Dapuzzo MR, Sierra RJ. Acetabular considerations during total hip arthroplasty for hip dysplasia. *Orthop Clin North Am*, 2012, 43: 369–375.
- ✓ (38) The B, Diercks RL, van Ooijen PM, van Horn JR. Comparison of analog and digital preoperative planning in total hip and knee arthroplasties. A prospective study of 173 hips and 65 total knees. *Acta Orthop*, 2005, 76: 78–84.
- ✓ (39) Crowe JF, Mani VJ, Ranawat CS. Total hip replacement in congenital dislocation and dysplasia of the hip. *J Bone Joint Surg Am*, 1979, 61: 15–23.
- ✓ (40) Charnley J. Total hip replacement by low-friction arthroplasty. *Clin Orthop Relat Res*, 1970, 72: 7–21.
- ✓ (41) Sofu H, Kockara N, Gursu S, Issin A, Oner A, Sahin V. Transverse subtrochanteric shortening osteotomy during cementless total hip arthroplasty in Crowe type-III or IV developmental dysplasia. *J Arthroplasty*, 2015, 30: 1019–1023.
- ✓ (42) Mu W, Yang D, Xu B, Mantimin A, Guo W, Cao L. Midterm outcome of cementless total hip arthroplasty in Crowe IV-Hartofilakidis type III developmental dysplasia of the hip. *J Arthroplasty*, 2016, 31: 668–675.
- ✓ (43) Ahmed E, Ibrahim e-G, Ayman B. Total hip arthroplasty with subtrochanteric osteotomy in neglected dysplastic hip. *Int Orthop*, 2015, 39: 27–33.
- ✓ (44) Li X, Lu Y, Sun J, Lin X, Tang T. Treatment of Crowe type-IV hip dysplasia using cementless total hip arthroplasty and double chevron subtrochanteric shortening osteotomy: a 5- to 10-year follow-up study. *J Arthroplasty*, 2017, 32: 475–479.
- ✓ (45) Greber EM, Pelt CE, Gililand JM, Anderson MB, Erickson JA, Peters CL. Challenges in total hip arthroplasty in the setting of developmental dysplasia of the hip. *J Arthroplasty*, 2017, 32: S38–S44.
- ✓ (46) Wu X, Li SH, Lou LM, Cai ZD. The techniques of soft tissue release and true socket reconstruction in total hip arthroplasty for patients with severe developmental dysplasia of the hip. *Int Orthop*, 2012, 36: 1795–1801.
- ✓ (47) Nogler MM, Thaler MR. The direct anterior approach for hip revision: accessing the entire femoral diaphysis without endangering the nerve supply. *J Arthroplasty*, 2017, 32: 510–514.

- ✓ (48) Taunton MJ, Trousdale RT, Sierra RJ, Kaufman K, Pagnano MW. John Charnley Award: randomized clinical trial of direct anterior and minimiposterior approach THA: which provides better functional recovery?. *Clin Orthop Relat Res*, 2018, 476: 216–229.
- ✓ (49) Maloney WJ, Keeney JA. Leg length discrepancy after total hip arthroplasty. *The Journal of arthroplasty*. 2004;19(4 Suppl 1):108–10.
- ✓ (50) Seagrave KG, Troelsen A, Malchau H, Husted H, Gromov K. Acetabular cup position and risk of dislocation in primary total hip arthroplasty. *Acta orthopaedica*. 2017;88(1):10–7.
- ✓ (51) Lindberg-Larsen M, Jørgensen CC, Solgaard S, Kjersgaard AG, Kehlet H. Increased risk of intraoperative and early postoperative periprosthetic femoral fracture with uncemented stems. *Acta orthopaedica*. 2017;88(4):390–4.
- ✓ (52) Wei J, Cai X, Wang Y, Chen H, Zhang B: [Mechanisms, prevention, and treatments of prosthetic aseptic loosening]. *Zhongguo xiu fu chong jian wai ke za zhi = Zhongguo xiu fu chongjian waik e zazhi = Chinese journal of reparative and reconstructive surgery* 2010, 24(3):296-300.
- ✓ (53) Streit MR, Innmann MM, Merle C, Bruckner T, Aldinger PR, Gotterbarm T. Long-term (20- to 25-year) results of an uncemented tapered titanium femoral component and factors affecting survivorship. *Clinical orthopaedics and related research*. 2013;471(10):3262–9.
- ✓ (54) Pitto RP, Bhargava A, Pandit S, Munro JT. Retroacetabular stress-shielding in THA. *Clinical orthopaedics and related research*. 2008;466(2):353–8.
- ✓ (55) Sanki T, Endo H, Tetsunaga T, Furumatsu T, Yamada K, Ozaki T. Ten-year outcomes of total hip arthroplasty using fit-and-fill type cementless collared straight stem implants: relationship between the initial contact status and stress shielding. *Acta medica Okayama*. 2020;74(1):7–15.
- ✓ (56) Thirion T, Georis P, Gillet P: [Preoperative planning interest of a total hip prosthesis]. *Revue medicale de Liege*. 2019;74(11):593–7.
- ✓ (57) Banerjee S, Cherian JJ, Elmallah RK, Pierce TP, Jauregui JJ, Mont MA. Robotassisted total hip arthroplasty. *Expert review of medical devices*. 2016;13(1): 47–56.

## 8. Utilizarea grefei osoase in defectele cavitare si non cavitare si aspecte privind integrarea acestora in context biologic

### Bibliografie:

- ✓ (0) Campbell's Operative Orthopaedics, Set. Elsevier, 14th December 2020
- ✓ (1) Cambell's Operative orthopaedics set 14th Edition by Frederic M. Azar,MD, James H. Beaty,MD.
- ✓ (2) Wilson MJ, Hook S, Whitehouse SL, et al.: Femoral impaction bone grafting in revision hip arthroplasty:705 cases from the originating centre, *Bone Joint J* 98-B:1611, 2016.
- ✓ (3) Babis GC, Sakellariou VI, O'Connor MI, et al.: Proximal femoral allograftprosthesis composites in revision hip replacement: a 12-year follow-up study, *J Bone Joint Surg* 92B:349, 2010
- ✓ (4) Lamberton TD, Kenny PJ, Whitehouse SL, et al.: Femoral impaction grafting in revision total hip arthroplasty: a follow-up of 540 hips, *J Arthroplasty* 26:2254, 2011.
- ✓ (5) Lim CT, Ananatullah DF, Huddleston 3rd JJ, et al.: Cortical strut allograft support of modular femoral junctions during revision total hip arthroplasty, *J Arthroplasty* 32:1586, 2017

- ✓ (6) Sternheim A, Rogers BA, Kuzyk PR, et al.: Segmental proximal femoral bone loss and revision total hip replacement in patients with developmental dysplasia of the hip: the role of allograft prosthesis composite, *J Bone Joint Surg* 94:762, 2012
- ✓ (7) Wilson MJ, Hook S, Whitehouse SL, et al.: Femoral impaction bone grafting in revision hip arthroplasty: 705 cases from the originating centre, *Bone Joint J* 98-B:1611, 2016
- ✓ (8) Mueller LA, Kress A, Nowak T, et al.: Periacetabular bone changes after uncemented total hip arthroplasty evaluated by quantitative computed tomography, *Acta Orthop* 77:380, 2006.
- ✓ (9) Harris WH, Crothers O, Oh I: Total hip replacement and femoral-head bone-grafting for severe acetabular deficiency in adults, *J Bone Joint Surg* 59A:752, 1977
- ✓ (10) Blackley HRL, Davis AM, Hutchison CR, et al.: Proximal femoral allografts for reconstruction of bone stock in revision arthroplasty of the hip: a nine to fifteen-year follow-up, *J Bone Joint Surg* 83A:346, 2001
- ✓ (11) Fetzner GB, Callaghan JJ, Templeton JE, et al.: Impaction allografting with cement for extensive femoral bone loss in revision hip surgery: a 4- to 8-year follow-up study, *J Arthroplasty* 16(8 Suppl 1):195, 2001
- ✓ (12) Emerson RH, Malinin TI, Cuellar AD, et al.: Cortical allografts in the reconstruction of the femur in revision total hip arthroplasty: a basic science and clinical study, *Clin Orthop Relat Res* 285:35, 1992
- ✓ (13) Robinson DE, Lee MB, Smith EJ, et al.: Femoral impaction grafting in revision hip arthroplasty with irradiated bone, *J Arthroplasty* 17:834, 2002.
- ✓ (14) Ornstein E, Linder L, Ranstam J, et al.: Femoral impaction bone grafting with the Exeter stem—the Swedish experience: survivorship analysis of 1305 revisions performed between 1989 and 2002, *J Bone Joint Surg* 91B:441, 2009
- ✓ (15) Regis D, Magnan B, Sandri A, Bartolozzi P. Long-term results of anti-protrusion cage and massive allografts for the management of periprosthetic acetabular bone loss. *J Arthroplasty* 2008;23:826–32.
- ✓ (16) Hernigou P, Pariat J, Queinnee S, Homma Y, Flouzat Lachaniette CH, Chevallier N, et al. Supercharging irradiated allograft with mesenchymal stem cells improves acetabular bone grafting in revision arthroplasty. *Int Orthop* 2014;38:1913–21
- ✓ (17) Bhatt RA, Rozental TD. Bone graft substitutes. *Hand Clin.* 2012;28(4):457–68.
- ✓ (18) Blokhuis TJ, Calori GM, Schmidmaier G. Autograft versus BMPs for the treatment of non-unions: what is the evidence? *Injury.* 2013;44(Suppl 1):S40–2
- ✓ (19) Blom AW, Cunningham JL, Hughes G, Lawes TJ, Smith N, Blunn G, Learmonth ID, Goodship AE. The compatibility of ceramic bone graft substitutes as allograft extenders for use in impaction grafting of the femur. *J Bone Joint Surg Br.* 2005;87(3):421–5
- ✓ (20) Mankin HJ, Vogelson FS and Thrasher AZ (1976) Massive resection and allograft replacement in the treatment of malignant bone tumors. *N Engl J Med* 294: 1247–1255
- ✓ (21) Campana V, Milano G, Pagano E, Barba M, Cicione C, Salonna G, Lattanzi W, Logroscino G. Bone substitutes in orthopaedic surgery: From basic science to clinical practice. *Journal of Materials Science: Materials.* 201245;:2445-2461
- ✓ (22) Jo, S.H.; Kim, Y.K.; Choi, Y.H. Histological evaluation of the healing process of various bone graft materials after engraftment into the human body. *Materials* 2018, 11, 714.
- ✓ (23) Fernandez de Grado, G.; Keller, L.; Idoux-Gillet, Y.; Wagner, Q.; Musset, A.-M.; Benkirane-Jessel, N.; Bornert, F.; Offner, D. Bone substitutes: A review of their characteristics, clinical use, and perspectives for large bone defects management. *J. Tissue Eng.* 2018, 9, 204173141877681.

- ✓ (24) Mankin HJ, Friedlaender GE, Tomford WW. Massive allograft transplantation following tumor resection. In: Friedlaender GE, Mankin HJ, Goldberg VM, editors. Bone grafts and bone graft substitutes; 2006. Rosemont: American Academy of Orthopaedic Surgeons; pp. 39–47
- ✓ (25) Lavernia CJ, Malinin TI, Temple HT, Moreyra CE. Bone and tissue allograft use by orthopaedic surgeons. *J Arthroplasty*. 2004; 19: 430–435.
- ✓ (26) Delloye C, Cornu O, Druetz V, Barbier O. Bone allografts. What they can offer and what they cannot. *J Bone Joint Surg Br*. 2007; 89B: 574–579
- ✓ (27) Matejovsky Z Jr, Matejovsky Z, Kofranek I. Massive allografts in tumour surgery. *Int Orthop*. 2006; 30: 478–483.
- ✓ (28) Lomas R, Chandrasekar A, Board TN. Bone allograft in the UK: perceptions and realities. *Hip Int*. 2013;23(5):427–33.
- ✓ (29) Wildemann B, Kadow-Romacker A, Pruss A, Haas NP, Schmidmaier G. Quantification of growth factors in allogenic bone grafts extracted with three different methods. *Cell Tissue Bank*. 2007;8:107–14.
- ✓ (30) Albert C, Frei H, Duncan C, Fernlund G: Mechanisms of stem subsidence in femoral impaction allografting, *Crit Rev Biomed Eng* 39(6):493, 2011
- ✓ (31) Gross AE, Goodman S: The current role of structural grafts and cages in revision arthroplasty of the hip, *Clin Orthop Relat Res* 429:193, 2004.
- ✓ (32) Bloem RM, Tomford WW, Mankin WW. Histological observations on retrieved human allografts. In *Orthopedic allograft surgery* (Eds Czitrom AA, Winter H). Springer Verlag, Wien 1996: 61-66.
- ✓ (33) Brodt MD, Swan CC, Brown TD. Mechanical behavior of human morselized cancellous bone in triaxial compression testing. *J Orthop Res* 1998; 16: 43-9.
- ✓ (34) Huiskes R. Total joint replacement: on innovation, ambition, courage, irony and morsellized bone, of course. *Iowa Orthop J* 1997; 17: 130-3.
- ✓ (35) Heekin RD, Engh CA, Vinh T. Morselized allograft in acetabular reconstruction. A postmortem retrieval analysis. *Clin Orthop* 1995; 319: 184-90
- ✓ (36) Linder L, Ling RSM, Gie GA, Timperley AJ. Histological analysis of cancellous impaction grafting in the femur: A retrieval study of five human femora. In: *Proceedings Am Acad Orthop Surg*, New Orleans, USA 1998: 185