CPD QUESTIONNAIRE. MARCH 2024 VOL 23 NO 1

Improving quality of care in total knee arthroplasty using risk prediction: a narrative review of predictive models and factors associated with their implementation in clinical practice (Gould DJ, Dowsey MM, Spelman T, Bailey JA, Bunzli S, Choong PFM)

1. What proportion of total knee replacement population predictive models reported in published studies have been implemented in the clinical environment?

a. Close to 100%	A
b. Approximately 50%	B
c. Approximately 20%	C
d. Approximately 10%	D
e. Approximately 5%	E

2. What proportion of published studies on total knee replacement population predictive models include evaluation of its clinical impact?

a. Close to 100%	A
b. Approximately 50%	B
c. Approximately 20%	C
d. Approximately 10%	D
e. Approximately 5%	E

3. Does machine learning improve predictive performance over traditional statistical techniques?

a. Yes	A
b. No	B
c. Yes, for continuous outcomes	C
d. Yes, for binary outcomes	D
e. Not necessarily	E

Thirty-day unplanned reoperation following spinal surgery: how does the South African private sector measure up? (Van Heukelum M, Mann TN, Dunn RN, Vlok AJ, Davis JH)

4. Which definition best describes 30-day reoperation rate?

a. Refers to 'all cause' readmission and may include medical, surgical, psychological and even social reasons for readmission post-surgery	A
b. Refers to an unplanned return to the operating room, where the second procedure was not scheduled or planned before the primary surgery and was not related to the disease's natural course	B
c. Refers to an unplanned return to the operating room, where the second procedure was planned before the primary surgery and was not related to the disease's natural course	C
d. Refers to two-stage surgical procedures planned within 30 days	D
e. Refers to a planned return to the operating room, where the second procedure was planned before the primary surgery	E

5. Which statement best describes the findings of this study?

a. Spine surgery among members of a large open medical scheme in South Africa was associated with low rates of 30-day reoperation; the rates compared favourably with those from developed countries	A
b. Spine surgery in state hospitals in South Africa was associated with low rates of 30-day readmission and reoperation; the rates compared favourably with those from developed countries	B
c. Spine surgery among members of a large open medical scheme in South Africa was associated with low rates of 30-day reoperation; the rates were significantly higher than those from developed countries	C
d. Spine surgery among members of a large open medical scheme in South Africa was associated with very high rates of 30-day reoperation; the rates compared favourably with those from developed countries	D
e. The paper does not comment on reoperation rates	E

6. Regarding the following statements associated with risk factors for 30-day reoperation, which statement is *incorrect*?

a. A notable contrast was that the current study did not find an association between BMI > 35 and 30-day reoperation, unlike most previous studies	A
b. American Society of Anaesthesiologists (ASA) score > 3, disseminated cancer, bleeding disorders and multilevel fusion are considered significant risk factors	B
c. The study confirms a higher rate of mortality, 30-day readmission and surgical site infection following spine surgery by a neurosurgeon	C
d. Surgery to the lumbar spine and theatre time of ≥ 4 hours were associated with significantly higher odds of 30-day reoperation compared to the reference categories in multivariate analyses	D
e. Patients aged 40–59 years and 60–79 years were associated with significantly higher odds of 30-day reoperation compared to patients younger than 40 years	E

A radiological assessment of tibia shaft fractures stabilised with intramedullary nails by trainee surgeons (Whitehead AS, Pietrzak JRT, Du Plessis J, Robertson A)

7. What was the primary objective of the study described in the article?

a. Assessing patient demographics in tibial fractures	A
b. Evaluating the radiological adequacy of reductions in tibial fractures	B
c. Investigating the impact of surgeon experience on fracture outcomes	C
d. Analysing the economic factors associated with tibial nail surgery	D
e. Examining the long-term effects of tibial fractures on patient mobility	E

8. Which of the following demographic factors was most commonly associated with tibial fractures?

a. Weekday admissions	A
b. Falls from height	B
c. Patients over 40 years of age	C
d. Pedestrian vehicle accidents	D
e. Female patients	E

9. According to the study, what surgical factor was significantly associated with a higher risk of malalignment in tibial fractures at both postoperative and follow-up measurements?

a. Use of the infrapatellar approach	A
b. Surgeries done after hours	B
c. Number of proximal screws	C
d. Inadequate intraoperative imaging	D
e. Use of Poller blocking screws	E

10. **What does the study reveal about the correlation between surgeon experience and the success of obtaining a good reduction in tibial fractures?**

a.	There was a clear correlation between increasing surgeon experience and better reduction outcomes	A
b.	Trainees consistently outperformed consultant surgeons in obtaining good reductions	B
c.	The study showed a higher risk of early mortality in cases performed by unsupervised trainees	C
d.	Consultant surgeons consistently outperformed trainees in obtaining good reductions	D
e.	There was no clear correlation between increasing surgeon experience and good reduction outcomes	E

Measurement of functional acetabular column sizes using a 3D CT model, for guiding percutaneous screw fixation of acetabular fractures using fluoroscopy (Strydom S, Booyse R, Chacko A, Mostert P, Snyckers CH)

11. **Which of the following *is not* a described CT-reconstructed view used to plan screw placement in the anterior or posterior column?**

a.	Inlet	A
b.	Outlook-obturator oblique	B
c.	Lateral	C
d.	Iliac oblique	D
e.	Anteroposterior	E

12. **What is considered an acceptable fracture gap and is associated with favourable joint function and reduction in risk for post-traumatic osteoarthritis?**

a.	1 mm or less	A
b.	2 mm or less	B
c.	3 mm or less	C
d.	4 mm or less	D
e.	5 mm or less	E

13. **Which of the following *is not* a considered a potential advantage of percutaneous fixation compared to open procedures?**

a.	Better visualisation of fracture reduction	A
b.	Less operative blood loss	B
c.	Lower infection risk	C
d.	Shorter operative time	D
e.	Less wound healing complications	E

14. **Which screw size will provide acceptable fracture reduction, without risk of cortical breach, in the posterior column of most females?**

a.	5 mm	A
b.	6.5 mm	B
c.	7.3 mm	C
d.	8 mm	D
e.	None of the above	E

Narrative review of the valgus knee in total joint arthroplasty (Almeida RP, Sekeitto AR, Sikhauli N, Pietrzak JRT, Mokete L)

15. **Technical goals in performing a primary total knee replacement in a valgus knee *do not* include which of the following?**

a.	Restoration of the joint line	A
b.	Slight overcorrection of alignment into varus	B
c.	Stability of the joint	C
d.	Correct patellofemoral tracking	D
e.	Adequate fixation of the implants	E

16. **Pathoanatomic features of the valgus knee *do not* include which of the following?**

a.	Hypoplasia of the distal femur lateral condyle	A
b.	Erosion of the lateral posterior condyle	B
c.	Remodelling of the lateral tibia plateau	C
d.	Contracture and tightening of the medial collateral ligament	D
e.	Lateral subluxation of the patella with patellofemoral maltracking	E

17. **Typical soft tissue releases in the valgus total knee replacement procedure *do not* include which of the following?**

a.	Iliotibial band	A
b.	Posterolateral capsule	B
c.	Medial patellofemoral ligament	C
d.	Lateral collateral ligament	D
e.	Posterior cruciate ligament	E

18. **Posterior stabilised implants in the severe valgus knee offer the following advantages over cruciate retaining implants (choose the *incorrect* answer):**

a.	Ability to lateralise the components to allow better patella tracking	A
b.	Increased inherent prosthesis stability from the post-cam mechanism	B
c.	Resection of less bone	C
d.	Ease of balancing the mediolateral and flexion/extension gaps once the posterior cruciate ligament is sacrificed	D
e.	Increased stability from joint surface conformity	E

3D printing in osteosarcoma of the scapula: a unique case (Makkar D, Sauhta R)

19. **What is the most common primary bone malignancy arising from the scapula in children?**

a.	Osteosarcoma	A
b.	Ewing's sarcoma	B
c.	Chondrosarcoma	C
d.	Rhabdomyosarcoma	D
e.	Osteochondroma	E

20. **What disease can predispose to osteosarcoma in adults?**

a.	Fibrous dysplasia	A
b.	Osteogenesis imperfecta	B
c.	Osteomalacia	C
d.	Hyperparathyroidism	D
e.	Paget's disease	E