Rencontres des Anesthésistes
Sanofi Aventis
RASA 2023

ALR pour chirurgie du membre inférieur

Les nouveaux blocs: utiles ou futiles ?

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25 juin 2023

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24, 25 juin 2023

Liens d'intérêts

Le Dr Ferré déclare avoir reçu des honoraires en tant que consultant ou conférencier de la part de Sanofi-Aventis

Sanofi ne recommande en aucun cas l'usage des produits en dehors de leurs indications approuvées.
Merci de consulter le résumé des caractéristiques du(es) produit(s) avant de le(s) prescrire.
Les informations ci-après sont fournies pour un usage médical et scientifique uniquement,
et sont destinées exclusivement aux participants de cette manifestation scientifique.

Learning to choose is hard.

Learning to choose well is harder.

And learning to choose well in a world of unlimited possibilities is harder still, perhaps too hard.

Barry Schwartz – *The Paradox of Choice: Why More Is Less* (2004)

ALR pour chirurgie du membre supérieur

Les nouveaux blocs: utiles ou futiles ?

ALR et chirurgie

ERAS

Contrôler la **Douleur**

Epargner **fonction** musculaire motrice

ERAS: *assurer une analgésie adéquate tout en préservant la fonction motrice afin de faciliter la déambulation*

Inpatient Falls after Total Knee Arthroplasty

The Role of Anesthesia Type and Peripheral Nerve Blocks

	Fall (N = 3,042)		No Fall (N = 188,528)		
	N*	%*	N*	%*	*P* Value†
Peripheral nerve block					
No block	2,666	87.6	165,669	87.9	0.693
Block	376	12.4	22,859	12.1	

FDR de chute:

- Age
- Type de chirurgie
- Anémie
- Comorbidités

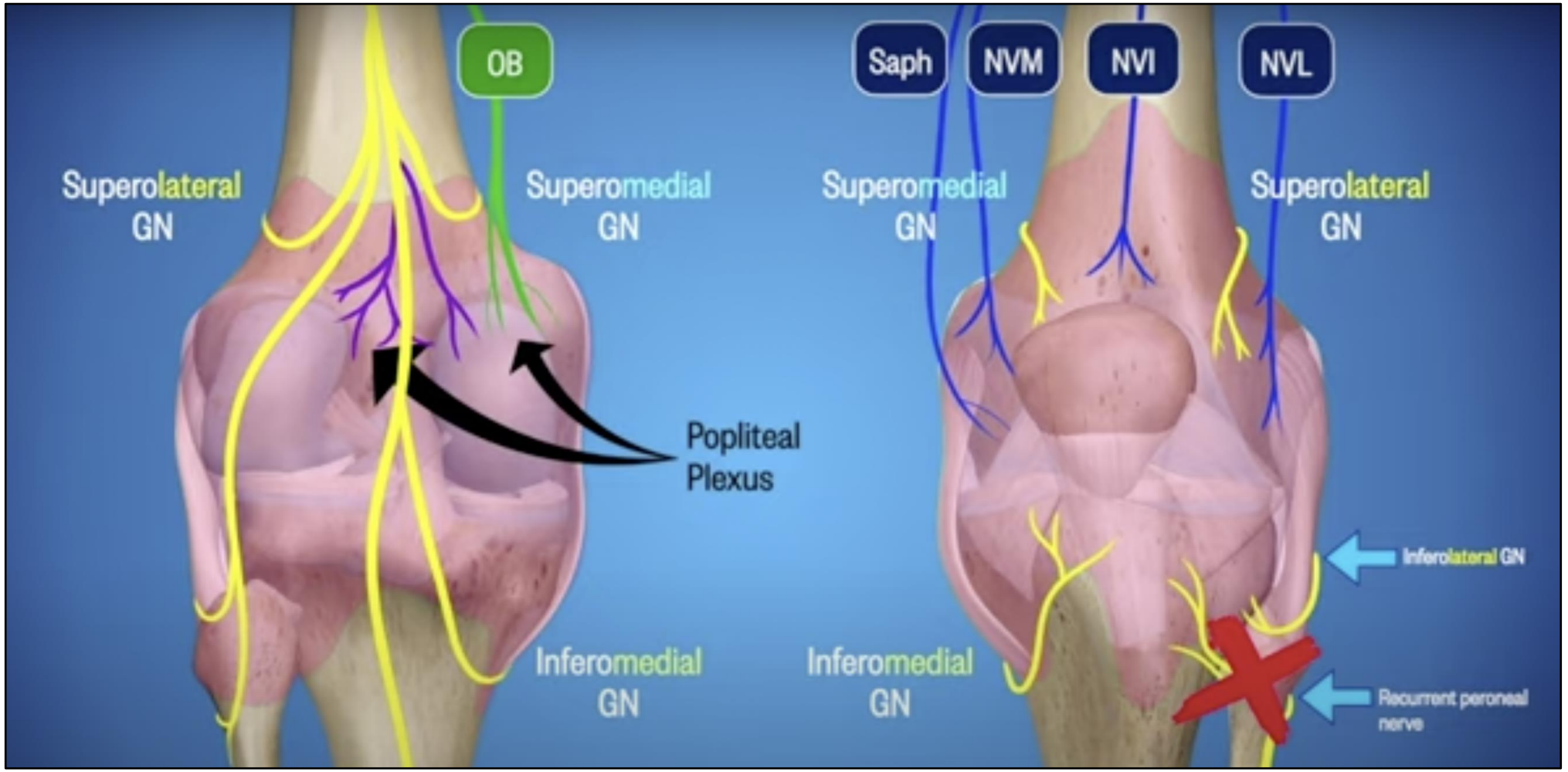
Memtsoudis SG, Anesthesiology 2014

OME ?

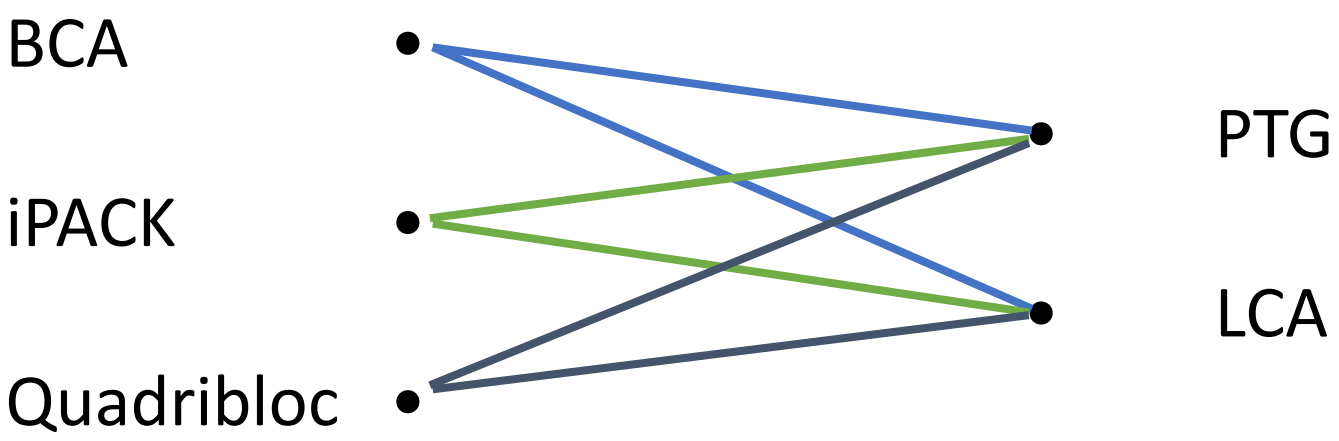
Dénomination	Facteur de conversion	Équivalent de la dose morphine PO
Morphine Orale (Actiskenan, Oramorph)	**1**	**Opioïde de référence**
Morphine IV	3	10mg morphine IV = 30mg morphine PO
Oxycodone IV	3	10mg oxycodone IV = 30mg de morphine PO
Oxycodone orale	1,5 à 2	5mg oxycodone PO = 7,5 à 10mg Morphine PO 10mg morphine PO = 5mg oxycodone PO

OME: oral morphine equivalent

Innervation du genou



ALR pour chirurgie du genou

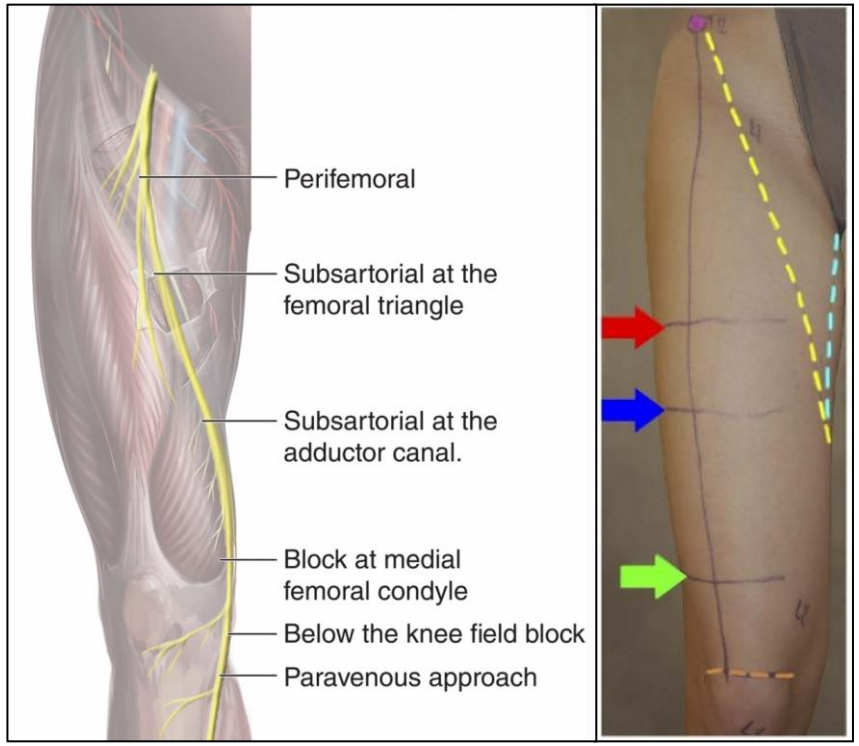


BCA: bloc au canal des adducteurs; iPACK: interspace between the popliteal artery and the capsule of the knee

PTG: prothèse totale de genou; LCA: ligament croisé antérieur

BCA

BCA



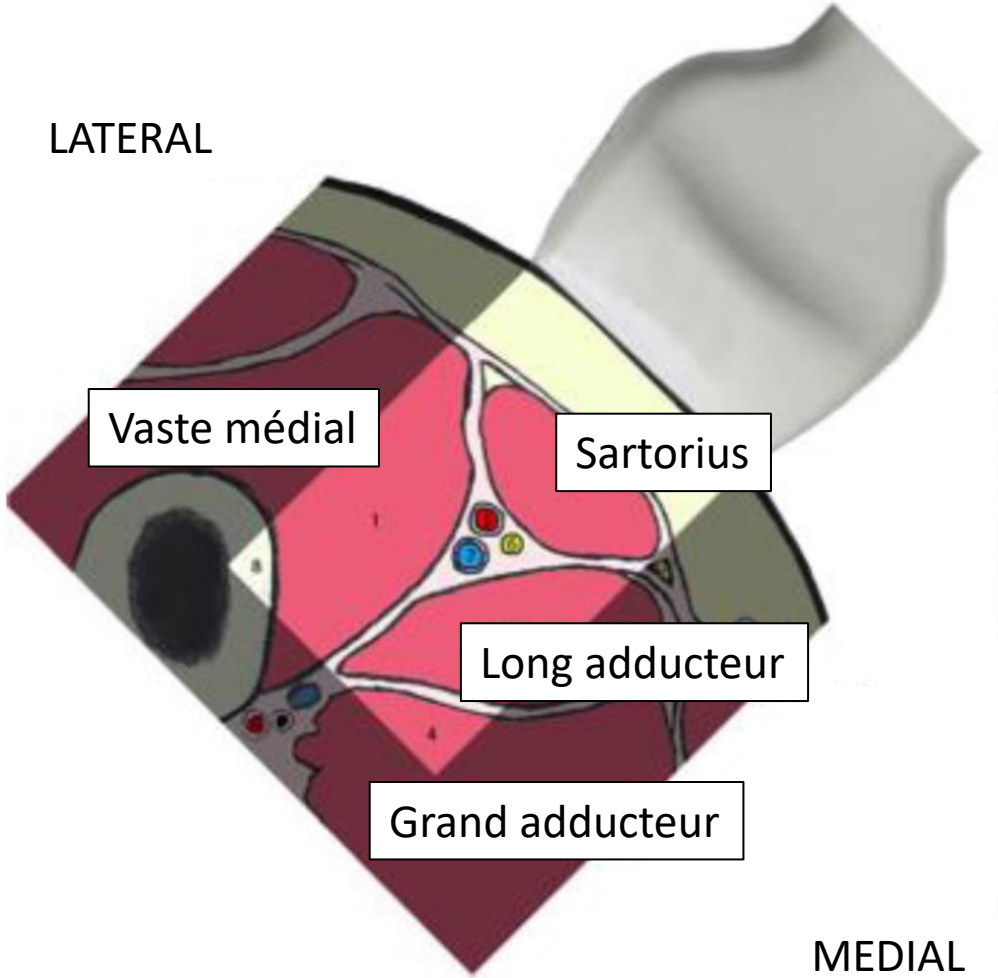
- **Nerf saphène**
- Nerf vaste médial
- Nerf musculo-cutané médial fémoral (61%)
- Branches antérieures du nerf obturateur (21%)

Boezaart, Reg Anesth Pain Med 2014

Wong, Reg Anesth Pain Med 2017

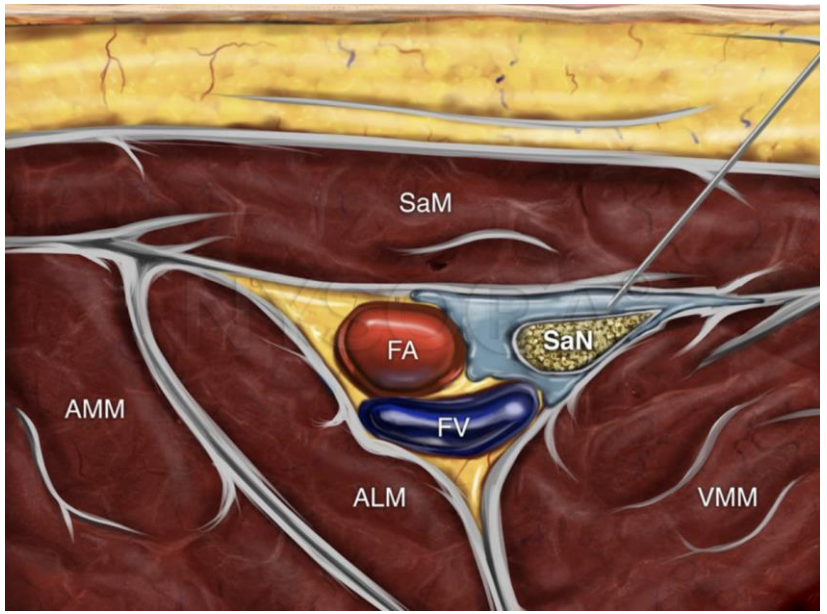
BCA

LATERAL



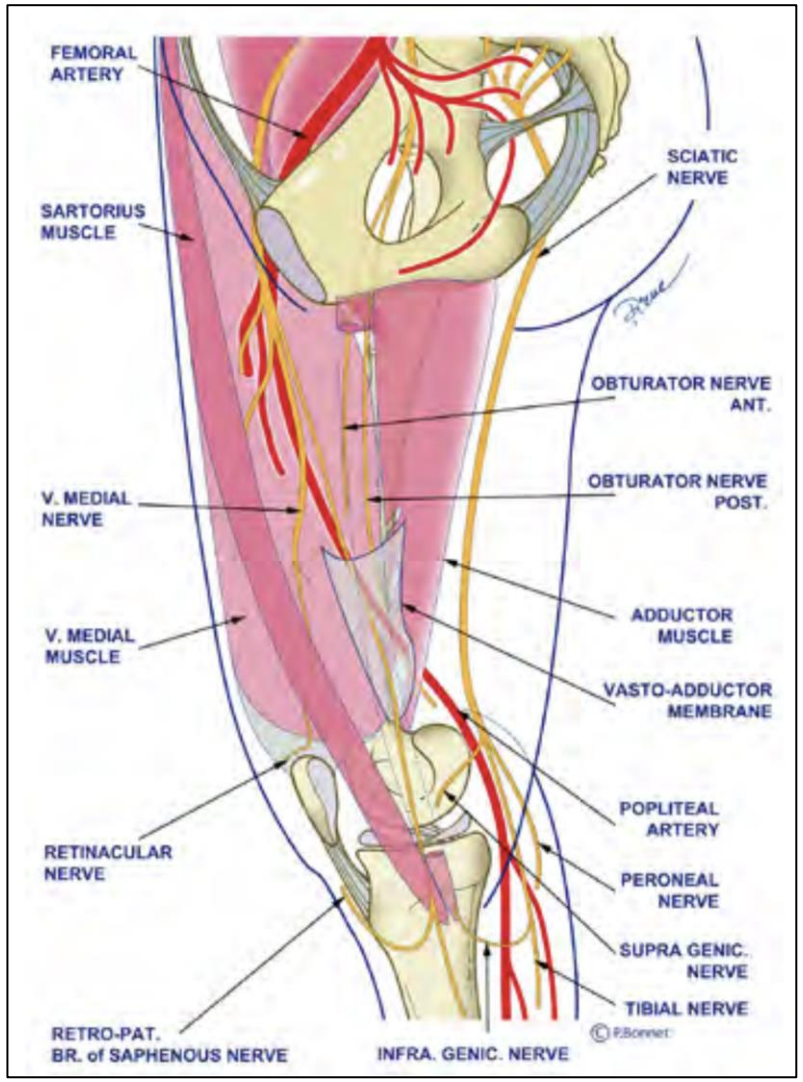
MEDIAL

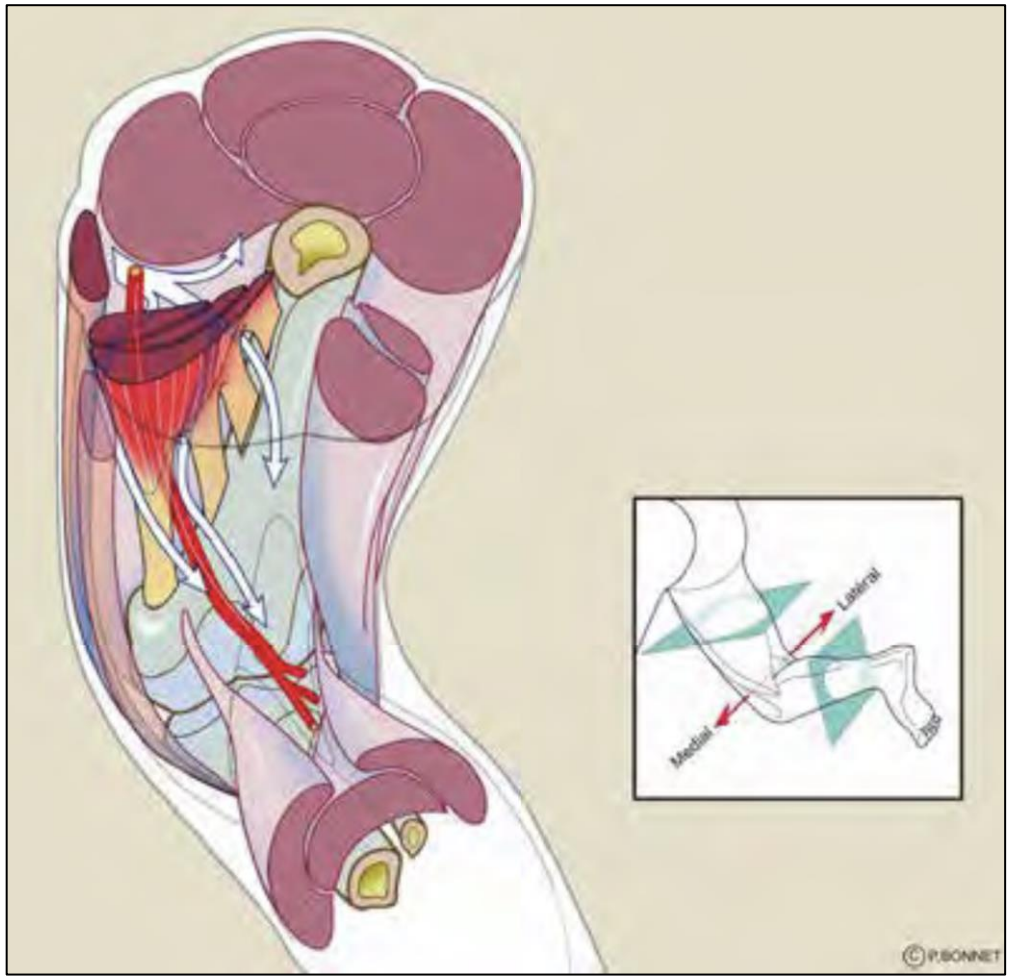
LATERAL



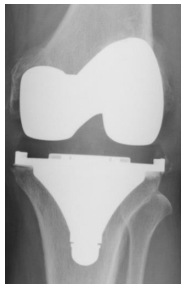
MEDIAL

BCA





PE Gautier et JP Lecoq, MAPAR 2018



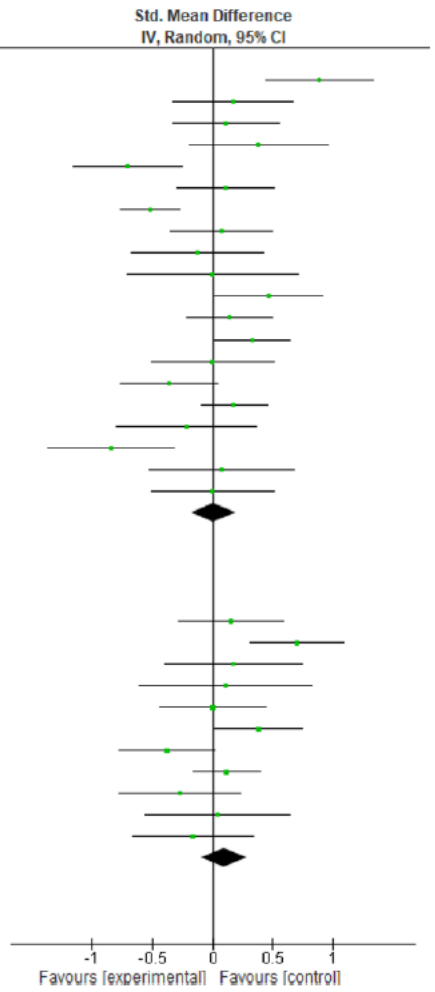
Adductor canal block versus femoral nerve block for pain control after total knee arthroplasty

A systematic review and Meta-analysis

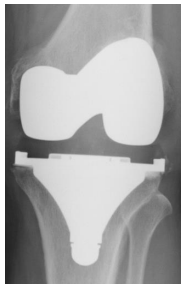
Douleur au repos

Douleur à la mobilisation

Study or Subgroup	ACB Mean	ACB SD	ACB Total	FNB Mean	FNB SD	FNB Total	Weight	Std. Mean Difference IV, Random, 95% CI
1.6.1 Pain Score at rest								
borys 2019	3.8	0.897609	43	3	0.88711	42	5.1%	0.89 [0.44, 1.33]
Elkassabany et al 2016	4.33	2.22	31	4	1.48	31	4.7%	0.17 [-0.33, 0.67]
fahmy 2020	3.6	3	40	3.3	2.3	40	5.2%	0.11 [-0.33, 0.55]
Jaegar et al 2013	1.78	1.677	22	1.15	1.58	26	4.3%	0.38 [-0.19, 0.95]
Kac¸maz 2021	2.5	0.14	40	2.6	0.14	40	5.1%	-0.71 [-1.16, -0.25]
kim et al 2014	3.1	3.2	46	2.8	2.3	47	5.4%	0.11 [-0.30, 0.51]
Klement et al 2019	3.7	2	118	4.8	2.2	146	6.4%	-0.52 [-0.77, -0.27]
Kukreja 2019	4.18	2.64	43	4	2.35	43	5.3%	0.07 [-0.35, 0.49]
Li et al 2016	2.6	1.5	24	2.8	1.6	27	4.4%	-0.13 [-0.68, 0.42]
Lim et al 2019	0.67	1.48	15	0.67	1.48	15	3.5%	0.00 [-0.72, 0.72]
Machi et al 2015	4.628	1.823	39	3.572	2.604	41	5.1%	0.46 [0.02, 0.91]
Mementsoudis et al 2014	2.81	2.42	59	2.47	2.42	59	5.7%	0.14 [-0.22, 0.50]
Mudumbai et al 2013	4	3	66	3	3	102	6.0%	0.33 [0.02, 0.64]
Patterson et al 2014	2.67	1.48	23	2.67	1.48	41	4.7%	0.00 [-0.51, 0.51]
Shah et al 2014	2.458	0.354	48	2.58	0.309	50	5.4%	-0.36 [-0.76, 0.03]
Tan et al 2018	3.26	0.36	100	3.2	0.3	100	6.2%	0.18 [-0.10, 0.46]
thobhani et al 2017	2.67	3.7	22	3.67	5.2	23	4.2%	-0.22 [-0.80, 0.37]
Wang 2020	2.666667	0.77842	30	3.333333	0.77842	30	4.5%	-0.85 [-1.38, -0.32]
wiessman et al 2016	1.67	2.22	21	1.5	2.22	21	4.1%	0.08 [-0.53, 0.68]
Zhang wei et al 2014	3.67	1.48	30	3.67	0.75	30	4.7%	0.00 [-0.51, 0.51]
Subtotal (95% CI)			**860**			**954**	**100.0%**	**0.01 [-0.18, 0.19]**
Heterogeneity: Tau² = 0.12; Chi² = 68.83, df = 19 (P < 0.00001); I² = 72%								
Test for overall effect: Z = 0.09 (P = 0.93)								
1.6.2 pain score at motion								
fahmy 2020	4.3	2.3	40	4	1.5	40	9.5%	0.15 [-0.29, 0.59]
Hegazy et al 2014	5.5	1.2	53	4.75	0.9	54	10.6%	0.70 [0.31, 1.09]
Jaegar et al 2013	3.8	2.08	22	3.4	2.36	26	7.1%	0.18 [-0.39, 0.74]
Lim et al 2019	5.67	2.96	15	5.3	3.7	15	5.2%	0.11 [-0.61, 0.82]
Machi et al 2015	4	2	39	4	2	41	9.5%	0.00 [-0.44, 0.44]
Mementsoudis et al 2014	3.8	2.6	59	2.82	2.46	59	11.2%	0.38 [0.02, 0.75]
Shah et al 2014	3.27	0.341	48	3.4	0.335	50	10.4%	-0.38 [-0.78, 0.02]
Tan et al 2018	3.9	0.4	100	3.85	0.45	100	13.5%	0.12 [-0.16, 0.39]
wang 2020	3.33	1.55	30	3.67	0.77	30	8.1%	-0.27 [-0.78, 0.23]
wiessman et al 2016	4.3	2.96	21	4.2	1.85	21	6.6%	0.04 [-0.57, 0.64]
Zhang wei et al 2014	5.25	0.9	30	5.4	0.9	30	8.2%	-0.16 [-0.67, 0.34]
Subtotal (95% CI)			**457**			**466**	**100.0%**	**0.09 [-0.10, 0.29]**
Heterogeneity: Tau² = 0.05; Chi² = 20.54, df = 10 (P = 0.02); I² = 51%								
Test for overall effect: Z = 0.94 (P = 0.35)								



Hasabo, Medicine 2022

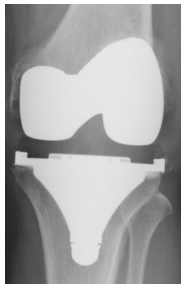


OME J1

OME J2

Study or Subgroup	ACB Mean	ACB SD	ACB Total	FNB Mean	FNB SD	FNB Total	Weight	Std. Mean Difference IV, Random, 95% CI
1.15.1 at 24 h								
Ardon et al 2016	74.96	37.23	45	72.4	62.34	45	6.4%	0.05 [-0.36, 0.46]
Chuan 2019	63.33	52.9	75	66	46.85	76	6.9%	-0.05 [-0.37, 0.27]
Elkassabany et al 2016	65	37	31	62	32.6	31	6.0%	0.08 [-0.41, 0.58]
Hegazy et al 2014	26	21.2	53	25.3	20.5	54	6.6%	0.03 [-0.35, 0.41]
Jaegar et al 2013	22	9	22	22	21	26	5.6%	0.00 [-0.57, 0.57]
kim et al 2014	50.3	30.8	46	50.4	33.1	47	6.5%	-0.00 [-0.41, 0.40]
Klement et al 2019	20	14.8	118	42.8	21.6	146	7.1%	-1.20 [-1.47, -0.94]
Kukreja 2019	75.54	49.81	43	68.78	55.08	41	6.4%	0.13 [-0.30, 0.56]
Lim et al 2019	21	11	15	20	12	15	4.9%	0.08 [-0.63, 0.80]
Machi et al 2015	9.9	7.4	39	11.18	10.37	41	6.3%	-0.14 [-0.58, 0.30]
Mudumbai et al 2013	69	39	66	64	45	102	6.9%	0.12 [-0.19, 0.43]
Mudumbani 2016	1.5	3.6	48	1.3	4.8	46	6.5%	0.05 [-0.36, 0.45]
Patterson et al 2014	6.03	3.7	23	7.03	3.78	41	5.9%	-0.26 [-0.78, 0.25]
Rassmussen et al 2014	78.2	42.2	23	94.6	48.5	22	5.5%	-0.36 [-0.94, 0.23]
Thacher et al 2017	73.4	40.03	150	59.8	40.03	129	7.2%	0.34 [0.10, 0.58]
thobhani et al 2017	88.67	38.5	22	47.67	28.1	23	5.3%	1.20 [0.56, 1.84]
Subtotal (95% CI)			**819**			**885**	**100.0%**	**-0.01 [-0.28, 0.25]**
Heterogeneity: Tau² = 0.24; Chi² = 103.03, df = 15 (P < 0.00001); I² = 85%								
Test for overall effect: Z = 0.09 (P = 0.93)								
1.15.2 at 48 h								
Ardon et al 2016	28.19	17.69	45	31.84	23.09	45	8.4%	-0.18 [-0.59, 0.24]
Chuan 2019	63.33	52.9	75	66.33	47.6	76	11.7%	-0.06 [-0.38, 0.26]
Elkassabany et al 2016	57.3	43	31	51.67	37	31	6.4%	0.14 [-0.36, 0.64]
Hegazy et al 2014	21.2	15.3	53	18.4	11.5	54	9.4%	0.21 [-0.17, 0.59]
kim et al 2014	60.7	32.3	46	62.8	39.1	47	8.6%	-0.06 [-0.46, 0.35]
Kukreja 2019	55.5	32.3	43	44.47	22.26	41	7.9%	0.39 [-0.04, 0.82]
Lim et al 2019	41	22	15	39	29	15	3.5%	0.08 [-0.64, 0.79]
Machi et al 2015	8.9	5.1	29	9.92	3.66	41	6.8%	-0.23 [-0.71, 0.24]
Mudumbai et al 2013	51.2	31	66	53	38	102	12.1%	-0.05 [-0.36, 0.26]
Rassmussen et al 2014	73	48.8	23	67.4	31.8	22	5.0%	0.13 [-0.45, 0.72]
Thacher et al 2017	45	33.7	150	41.8	33.7	129	15.8%	0.09 [-0.14, 0.33]
thobhani et al 2017	147.67	58.5	22	96.33	38.5	23	4.4%	1.02 [0.40, 1.65]
Subtotal (95% CI)			**598**			**626**	**100.0%**	**0.08 [-0.06, 0.22]**
Heterogeneity: Tau² = 0.02; Chi² = 16.23, df = 11 (P = 0.13); I² = 32%								
Test for overall effect: Z = 1.09 (P = 0.28)								

Hasabo, Medicine 2022



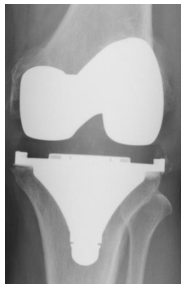
TUG J1

TUG J2

TUG J3

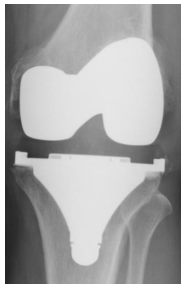
Study or Subgroup	ACB Mean	ACB SD	ACB Total	FNB Mean	FNB SD	FNB Total	Weight	Std. Mean Difference IV, Random, 95% CI
1.9.1 24 hours								
Chuan 2019	40.66667	19.65295	75	46.66667	24.18204	76	9.6%	-0.27 [-0.59, 0.05]
Elkassabany et al 2016	65.33333	38.08219	31	70.33333	38.85937	31	9.2%	-0.13 [-0.63, 0.37]
fahmy 2020	5.9	1.2	40	11.1	2.4	40	8.8%	-2.71 [-3.33, -2.10]
Hegazy et al 2014	5.2	0.7	53	10.3	3.5	54	9.3%	-2.00 [-2.46, -1.53]
Jaegar et al 2013	37	22	23	39	16	27	9.0%	-0.10 [-0.66, 0.45]
Li et al 2016	75.52632	12.89474	24	81.84211	14.21053	27	9.0%	-0.46 [-1.01, 0.10]
Lim et al 2019	78.83333	63.46856	15	84.96667	40.8129	15	8.5%	-0.11 [-0.83, 0.60]
Machi et al 2015	54.6798	32.4165	39	69.82759	29.51863	41	9.3%	-0.48 [-0.93, -0.04]
Macrinici et al 2017	35	31.33339	49	48	31.33339	49	9.4%	-0.41 [-0.81, -0.01]
seo et al 2017	36.8	3.99	19	42.1	3.6	24	8.8%	-0.86 [-1.49, -0.23]
Shah et al 2014	51.81	7.93	48	180	68.44	50	9.1%	-2.58 [-3.13, -2.04]
Subtotal (95% CI)			**416**			**434**	**100.0%**	**-0.92 [-1.47, -0.36]**
Heterogeneity: Tau² = 0.81; Chi² = 138.25, df = 10 (P < 0.00001); I² = 93%								
Test for overall effect: Z = 3.24 (P = 0.001)								
1.9.2 48 Hours								
Chuan 2019	39.33333	19.65295	75	44	21.15928	76	21.8%	-0.23 [-0.55, 0.09]
Elkassabany et al 2016	46	33.41906	31	46	30.31031	31	9.0%	0.00 [-0.50, 0.50]
fahmy 2020	4.8	0.8	40	5.2	0.8	40	11.3%	-0.50 [-0.94, -0.05]
Hegazy et al 2014	4.2	0.9	53	4.5	0.8	54	15.3%	-0.35 [-0.73, 0.03]
Li et al 2016	51.05263	13.68421	24	62.63158	14.47368	27	6.8%	-0.81 [-1.38, -0.23]
Lim et al 2019	62.66667	23.22819	15	67.63333	33.28828	15	4.3%	-0.17 [-0.89, 0.55]
Machi et al 2015	45.5665	24.17019	39	49.38424	26.96413	41	11.6%	-0.15 [-0.59, 0.29]
Macrinici et al 2017	34	31.33339	49	44	29.59264	49	14.0%	-0.33 [-0.72, 0.07]
seo et al 2017	34.1	3.2	19	40.4	4.72	24		Not estimable
wiessman et al 2016	53.33333	33.33333	21	70.5	25.92593	21	5.8%	-0.56 [-1.18, 0.05]
Subtotal (95% CI)			**347**			**354**	**100.0%**	**-0.32 [-0.47, -0.17]**
Heterogeneity: Tau² = 0.00; Chi² = 6.67, df = 8 (P = 0.57); I² = 0%								
Test for overall effect: Z = 4.16 (P < 0.0001)								
1.9.3 72 Hours								
Li et al 2016	30	13.15789	24	33.42105	14.21053	27	25.4%	-0.25 [-0.80, 0.31]
Machi et al 2015	41.00985	20.47358	39	36.82266	15.04315	41	26.3%	0.23 [-0.21, 0.67]
seo et al 2017	29.2	2.7	19	37.09	3.8	24	23.3%	-2.30 [-3.09, -1.51]
wiessman et al 2016	51	20.74074	21	50.66667	24.44444	21	25.0%	0.01 [-0.59, 0.62]
Subtotal (95% CI)			**103**			**113**	**100.0%**	**-0.53 [-1.47, 0.40]**
Heterogeneity: Tau² = 0.81; Chi² = 31.34, df = 3 (P < 0.00001); I² = 90%								
Test for overall effect: Z = 1.12 (P = 0.26)								

Hasabo, Medicine 2022



BCA vs BF

- Scores douleur: BCA = BF
- OME: BCA = BF
- Fonction musculaire motrice: BCA ≥ BF



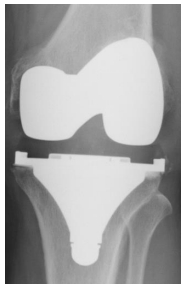
Pain management after total knee arthroplasty

PROcedure SPEcific Postoperative Pain ManagemenT recommendations

Table 1 Overall recommendations for pain management following primary total knee arthroplasty

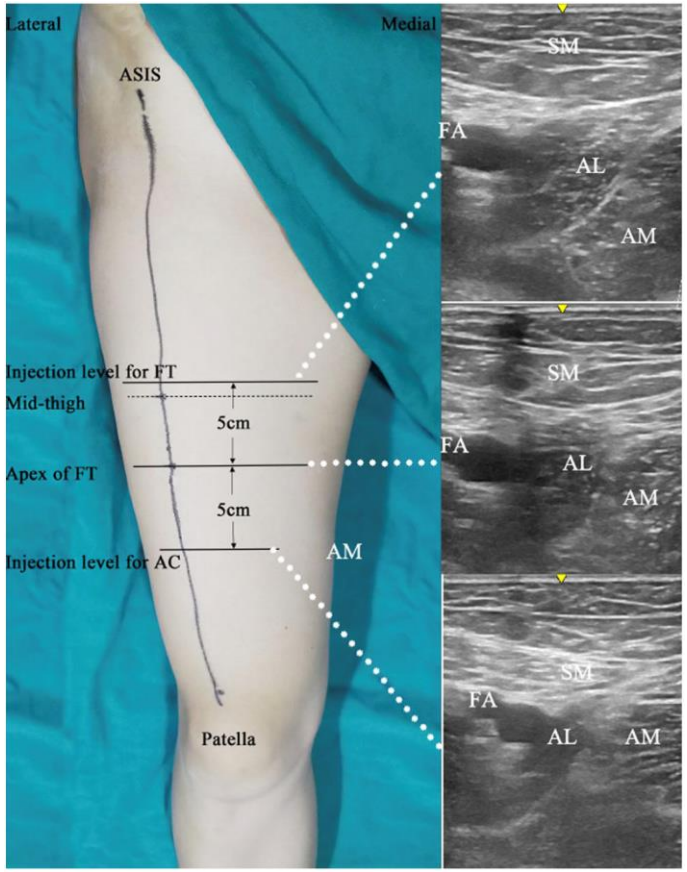
Preoperative and intra-operative
Paracetamol and nonsteroidal anti-inflammatory drugs or cyclo-oxygenase-2 specific inhibitors, administered either preoperatively or intra-operatively
Single shot adductor canal block administered preoperatively and peri-articular local infiltration analgesia administered intra-operatively. Combination of these two techniques is preferred
Dexamethasone (≥10 mg, i.v.) administered intra-operatively
Intrathecal morphine (100 μg) may only be considered only in hospitalised patients when surgery is performed under spinal anaesthesia and in the situation wherein both adductor canal block and local infiltration analgesia are not possible
Postoperative
Paracetamol and nonsteroidal anti-inflammatory drug or cyclo-oxygenase-2 specific inhibitors
Opioids should be reserved as rescue analgesics

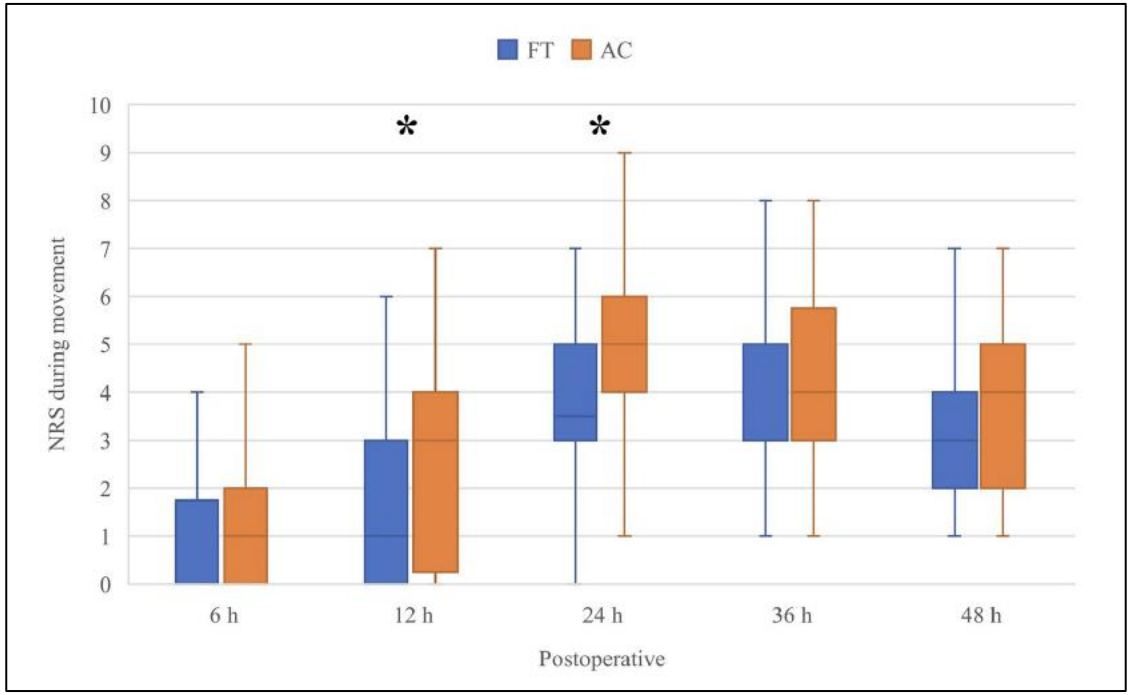
Lavand'homme et al., Eu J Anaesthesiol 2022



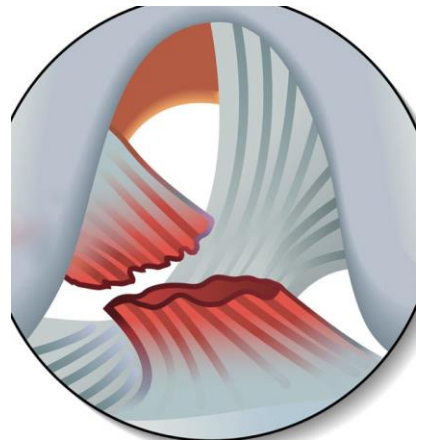
BCA proximal ou distal ?

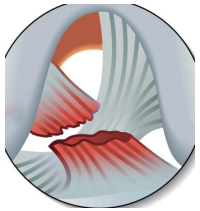
Comparison of the ultrasound-guided single-injection femoral triangle block versus adductor canal block for analgesia following total knee arthroplasty: a randomized, double-blind trial





Song, J of Anesth 2020



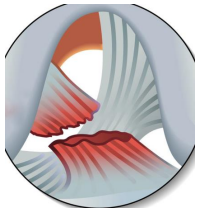


Evidence Basis for Regional Anesthesia in Ambulatory Anterior Cruciate Ligament Reconstruction: Part I—Femoral Nerve Block

L. Vorobeichik, Anesth Analg 2019

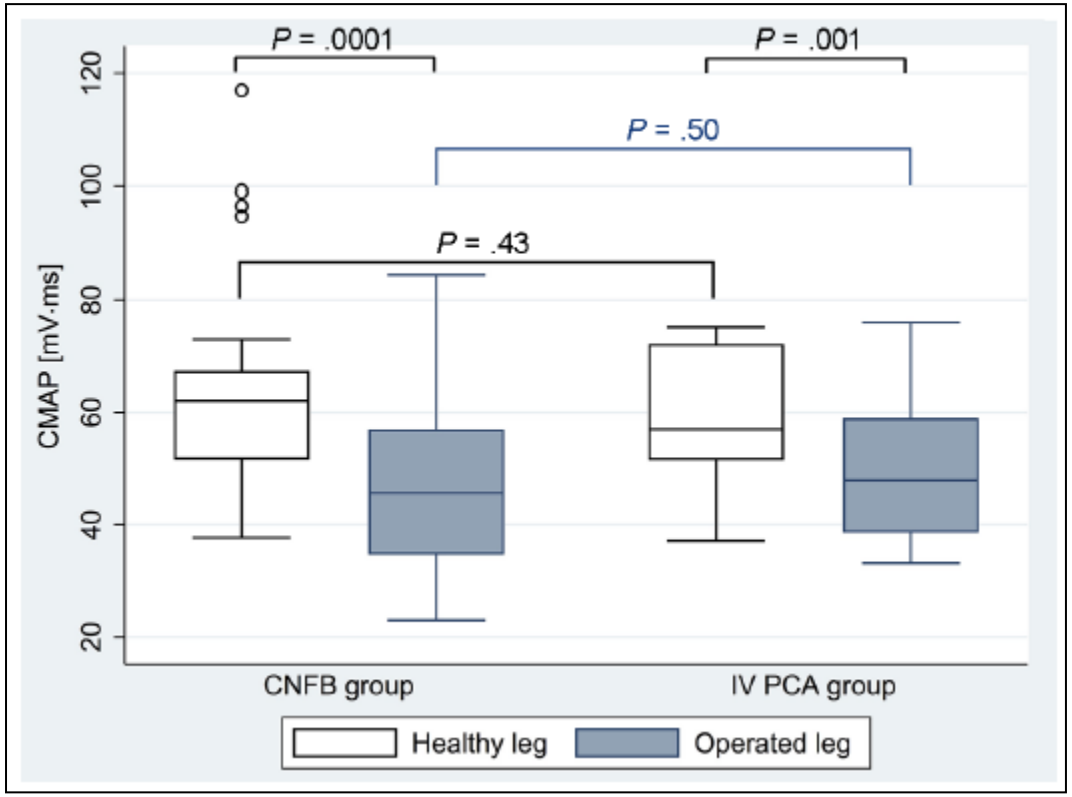
Evidence Basis for Regional Anesthesia in Ambulatory Arthroscopic Knee Surgery and Anterior Cruciate Ligament Reconstruction: Part II: Adductor Canal Nerve Block—A Systematic Review and Meta-analysis

H. Sehmbi, Anesth Analg 2019

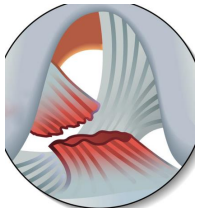


Electrophysiological Study of Femoral Nerve Function After a Continuous Femoral Nerve Block for Anterior Cruciate Ligament Reconstruction

A Randomized, Controlled Single-Blind Trial



K. Stebler, AJSM 2016



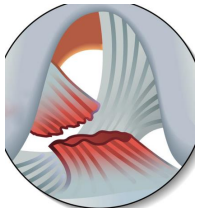
Evidence Basis for Regional Anesthesia in Ambulatory Anterior Cruciate Ligament Reconstruction: Part I—Femoral Nerve Block

Motor Weakness at 24 Hours

One trial[22] examined this outcome. Compared to control, adding an FNB did not affect motor power at 24 hours.

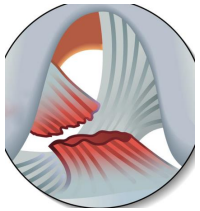
Long-term quadriceps weakness was not evaluated in any of the trials reviewed. Finally, none of the patients reported any block-related complications.

L. Vorobeichik, Anesth Analg 2019



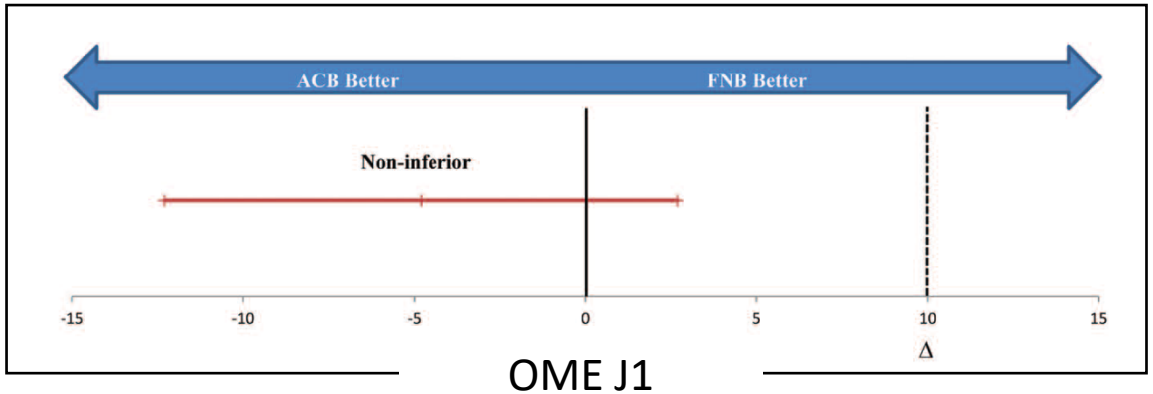
Is an Adductor Canal Block Really Better Than a Femoral Block for Anterior Cruciate Ligament Reconstruction?

L. La Colla, Anesthesio 2016

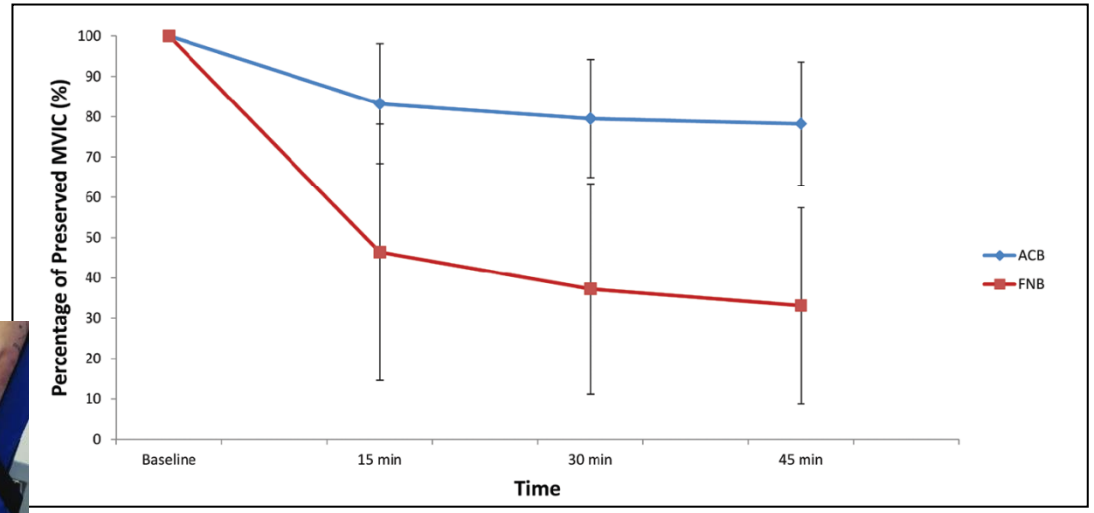


BCA vs BF

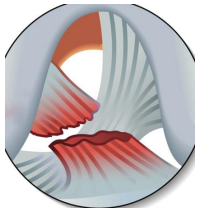
Adductor Canal Block Provides Noninferior Analgesia and Superior Quadriceps Strength Compared with Femoral Nerve Block in Anterior Cruciate Ligament Reconstruction



OME J1



F. Abdallah, Anesthesio 2016



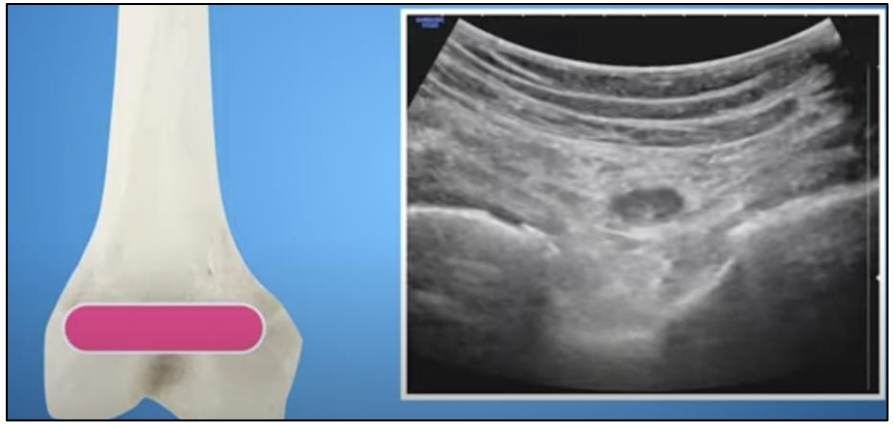
BCA vs control

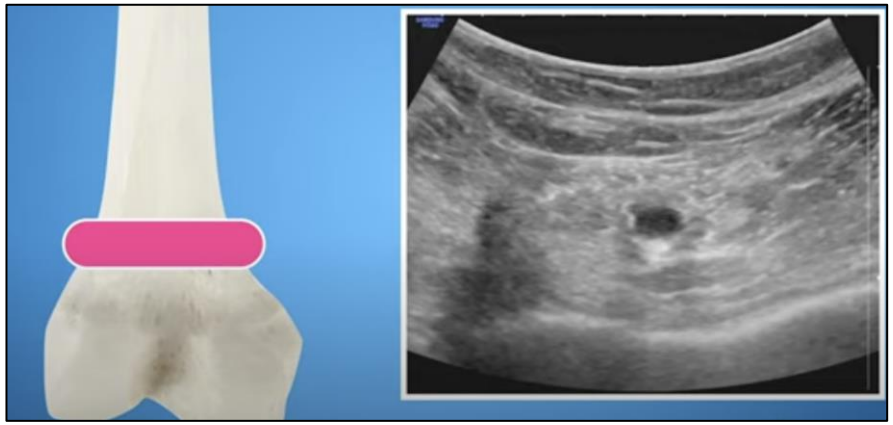
- ENS en SSPI: -1,46 [-2,1 à -0,9] (p<0,0001)
- OME à J1: -7,41 mg [-14,8 à -0,1] (p=0,05)

H. Sehmbi, Anesth Analg 2019

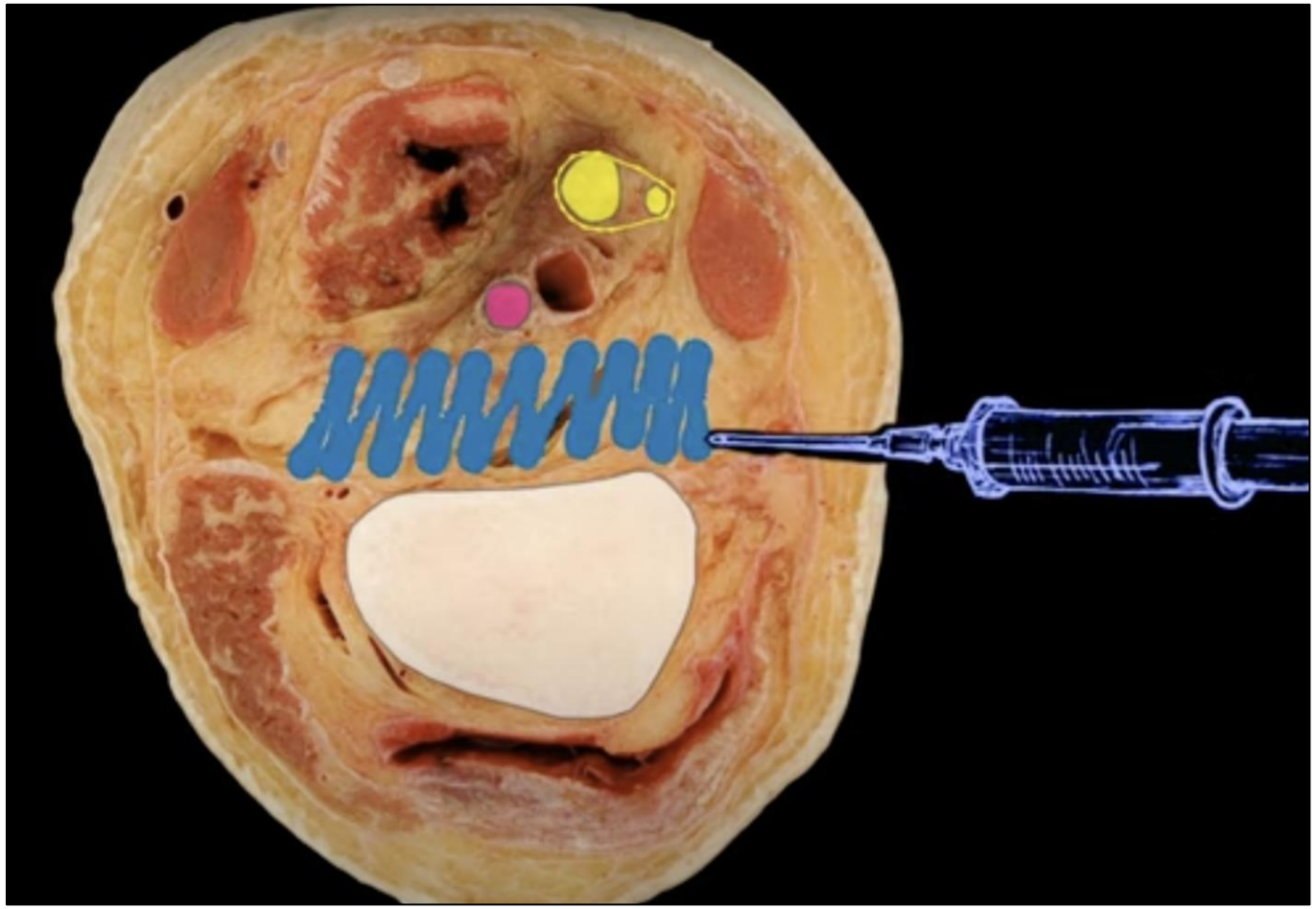
iPACK

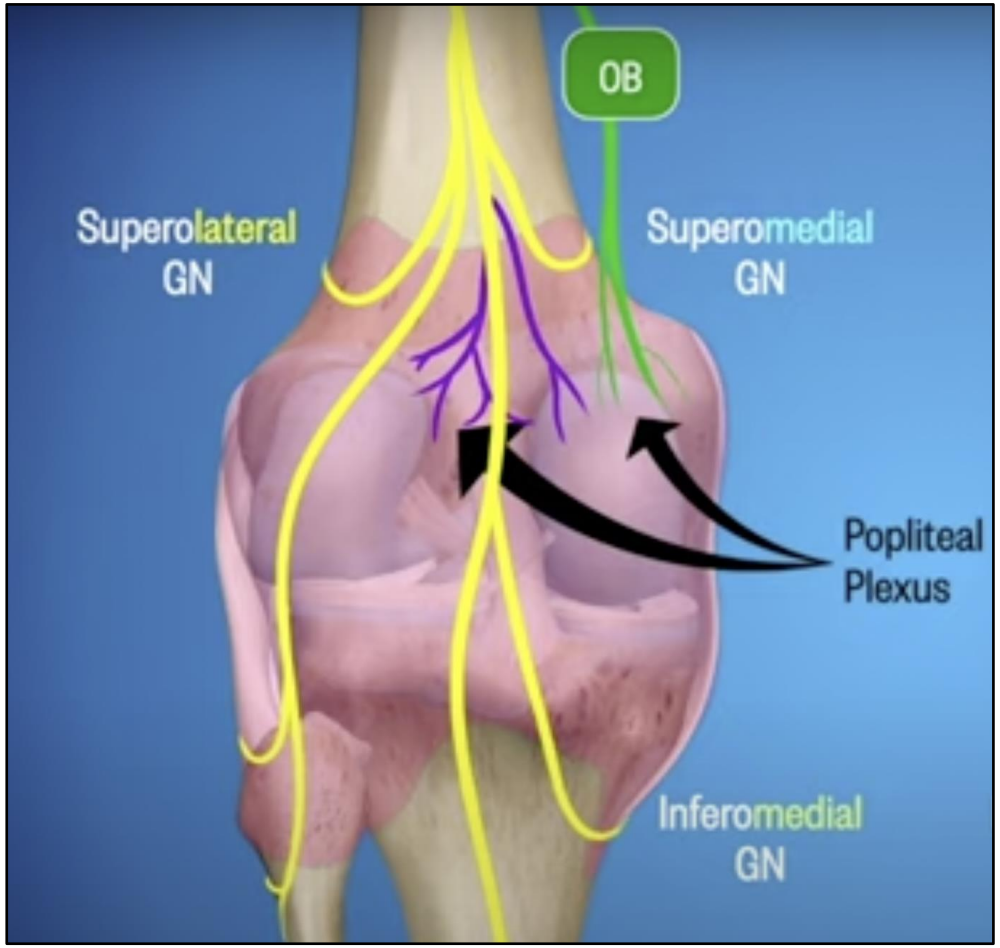
iPACK

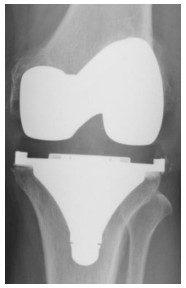




iPACK




OB
Superolateral GN
Superomedial GN
Popliteal Plexus
Inferomedial GN



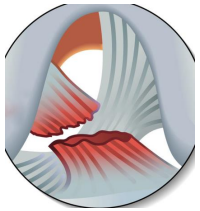
iPACK

Review

Does the addition of iPACK to adductor canal block in the presence or absence of periarticular local anesthetic infiltration improve analgesic and functional outcomes following total knee arthroplasty? A systematic review and meta-analysis

Conclusion Adding iPACK to ACB in the setting of periarticular LIA does not improve analgesic outcomes following TKA. In the absence of LIA, adding iPACK to ACB reduces pain up to 24 hours and enhances functional recovery. Our findings do not support the addition of iPACK to ACB when LIA is routinely administered.

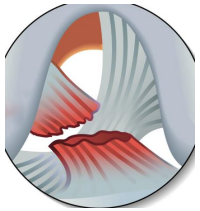
Hussain et al., Reg Anesth Pain Med 2021



iPACK

- [BCA] *vs* [BCA + iPACK] pour chirurgie du LCA sous AG
- Hypothèse : supériorité analgésique postopératoire de la stratégie [BCA + iPACK]
- Critère de jugement principal : consommation OME à J2

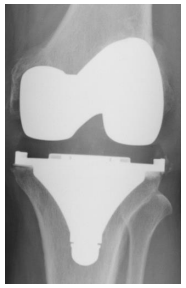
BCA: bloc au canal des adducteurs; iPACK: interspace between the popliteal artery and the capsule of the knee; OME: oral morphine equivalent



iPACK

	BCA (n=40)	**BCA + iPACK** (n=45)	**p**
OME (mg)			
• SSPI	18 [9 – 30]	18 [0 – 24]	0.73
• Entre SSPI et J1	20 [0 – 35]	20 [0 – 32.5]	0.70
• A J1	28 [13.5 – 68]	38 [19.5 – 55.25]	0.71
• Entre J1 et J2	10 [0 – 40]	20 [0 – 40]	0.59
• **A J2**	50 **[13.5 – 102.5]**	60 **[31.5 – 89]**	**0.49**

Quadribloc

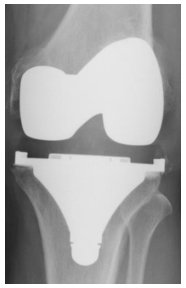


Pain after knee arthroplasty: an unresolved issue

Incidence douleur modérée à sévère (ENS > 4) après PTG

Day 1 (%)	Day 3 (%)	Day 30	3 Months and over (%)	Neuropathic features
58	45	52 % 16 % severe pain	20 % (10–34 %)	6 %

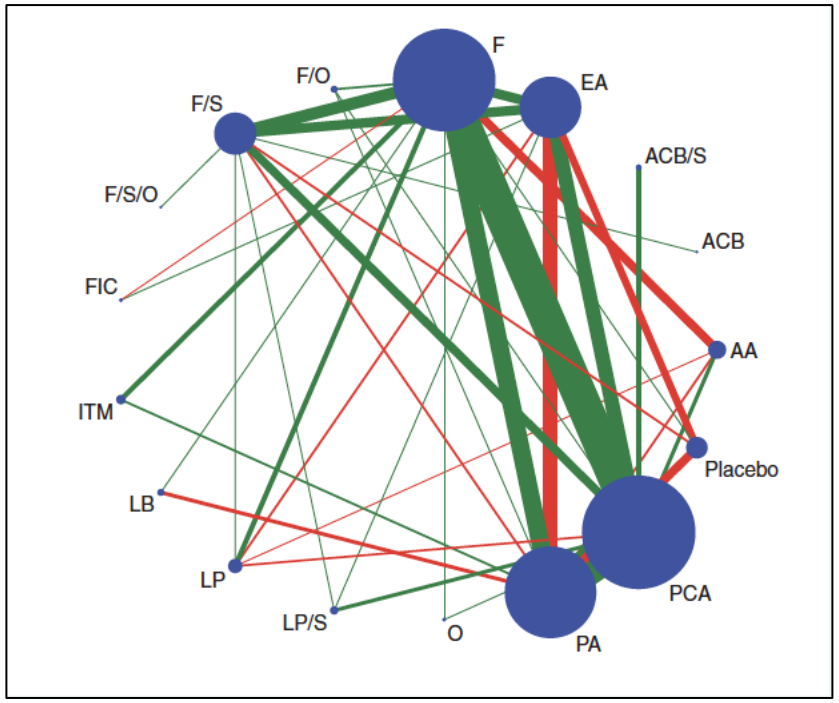
Grosu, Knee Surg Sports Traumatol Arthrosc 2014



PAIN MEDICINE

Pain Management Modalities after Total Knee Arthroplasty

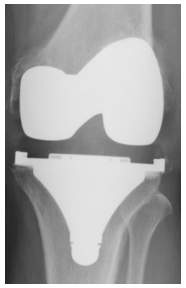
A Network Meta-analysis of 170 Randomized Controlled Trials



Conclusions

Multiple nerve blocks (F/S, F/S/O, F/O, FIC, and LP/S) performed better than single nerve blocks, PA, and EA. Based on the available evidence, the combination of femoral and sciatic nerve block appears be the best overall modality. Although F/S/O and F/O also appear effective, less evidence supports them. Blocking posterior innervation of the knee seems to be more important than previously thought and improves analgesia and overall outcomes.

Terkawi et al., Anesthesiology 2017



Total knee arthroplasty under quadruple nerve block with ropivacaine 0.32%: effect of addition of intravenous dexmedetomidine to intravenous dexamethasone on analgesic duration

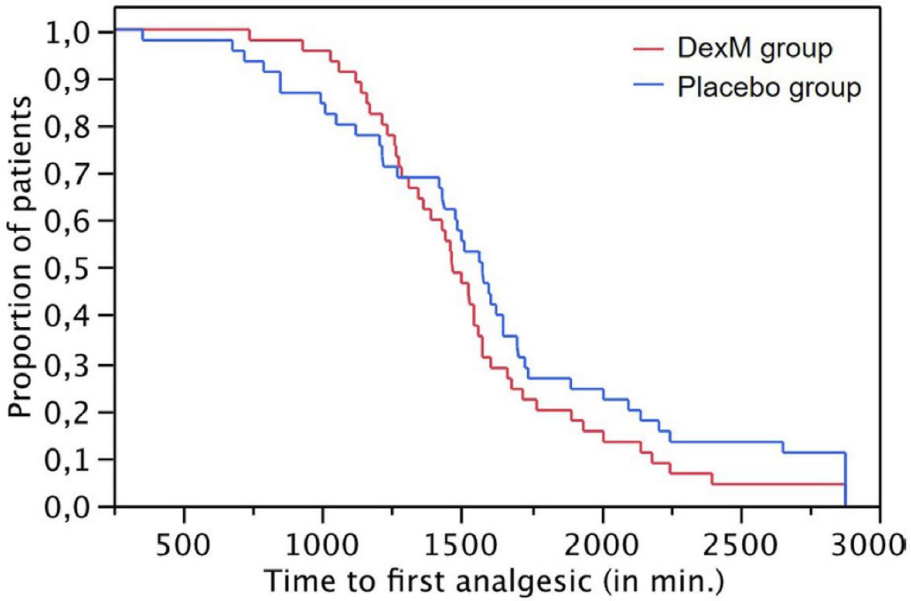
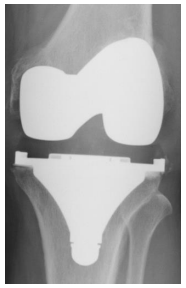


Table 3 VRS pain scores

	Placebo group (n=45)	DexM group (n=45)	P value
VRS max in PACU	0 (0–0)	0 (0–0)	0.33
VRS at H0	0 (0–0)	0 (0–0)	0.99
VRS at H6	0 (0–0)	0 (0–0)	0.59
VRS at H12	0 (0–0)	0 (0–0)	0.60
VRS at H18	0 (0–3)	2 (0–4)	0.02
VRS at H24	2 (1–5)	3 (0–4)	0.68
VRS at H30	2 (0–5)	2 (0–5)	0.88
VRS at H36	0 (0–3)	1 (0–4)	0.32
VRS at H42	1 (0–3)	2 (0–3)	0.56
VRS at H48	1 (0–3)	2 (0–3)	0.77

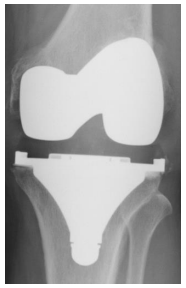
Chassery, Reg Anesth Pain Med 2020



Combined proximal or distal nerve blocks for postoperative analgesia after total knee arthroplasty: a randomised controlled trial

	All patients (*n*=90)	Distal group (*n*=45)	Proximal group (*n*=45)	P-value*,†
Cumulative OME consumption				
Cumulative OME H0–H48, mg	30 [20–66]	33 [18–78]	30 [22–51]	0.29
Cumulative OME H0–H24, mg	15 [0–36]	30 [13–59]	15 [0–18]	*P*<0.001
Cumulative OME H24–H48, mg	15 [0–30]	15 [0–30]	15 [15–38]	0.06
VRS at H0	0 [0–6]	5 [0–8]	0 [0–0]	*P*<0.001
VRS at H6	0 [0–2]	1 [0–3]	0 [0–0]	*P*<0.001
VRS at H12	0 [0–0]	0 [0–1]	0 [0–0]	*P*<0.01
VRS at H18	0 [0–2]	0 [0–2]	0 [0–2]	0.90
VRS at H24	2 [0–3]	1 [0–2]	2 [0–4]	0.06
VRS at H30	1 [0–4]	1 [0–3]	3 [0–5]	0.07
VRS at H36	0 [0–1]	0 [0–0]	0 [0–2]	*P*<0.01
VRS at H42	0 [0–2]	0 [0–2]	0 [0–2]	0.90
VRS at H48	0 [0–2]	0 [0–1]	0 [0–2]	0.19

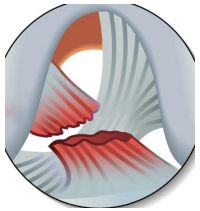
Marty et al., Br J Anaesth 2022



Combined proximal or distal nerve blocks for postoperative analgesia after total knee arthroplasty: a randomised controlled trial

	Distal group	Proximal group	P-value[†,‡]
Ability to stand up			
Day 0 (operating day)	33/43 (77)	29/45 (64)	0.20
Day 1	44/45 (98)	43/45 (96)	1.00
Day 2	43/43 (100)	43/43 (100)	–
Ability to walk			
Day 0 (operating day)	25/43 (58)	1/45 (2)	<0.001
Day 1	43/45 (96)	41/45 (91)	0.66
Day 2	43/43 (100)	42/43 (98)	1.00
Walking >50 m			
Day 0 (operating day)	14/43 (33)	1/45 (2)	<0.001
Day 1	37/45 (82)	33/45 (73)	0.31
Day 2	39/43 (91)	40/43 (93)	1.00
Quadriceps motricity (paralysis/paresis/normal)			
Day 0 (operating day)	6/14/23 (14/33/53)	41/3/1 (91/7/2)	<0.001
Day 1	1/4/40 (2/9/89)	2/4/39 (4/9/87)	0.75
Day 2	0/0/43 (0/0/100)	0/1/42 (0/2/98)	1.00

Marty et al., Br J Anaesth 2022



A quadruple peripheral nerve block outside the OR for anterior cruciate ligament reconstruction reduces the OR occupancy time

Teulières, Knee Surg Sports Traumatol Arthrosc 2022

Effects of the addition of dexamethasone on postoperative analgesia after anterior cruciate ligament reconstruction surgery under quadruple nerve blocks

Aoyama, BMC Anesthesiol 2021

BCA

- Nerf saphène + …
- Volume: 20 mL
- Epargne fonction musculaire
- PTG: BCA = BF (?)
- LCA: bénéfice modéré

iPACK

- Plexus poplité
- Volume: 20 mL
- Epargne fonction musculaire
- PTG: réalité si pas de LIA et BS
- LCA: mythe

Quadribloc

- ❗LAST
- Volume 60-70 mL
- Atteinte fonction musculaire
- PTG: réalité
- LCA: réalité