BSOA NEWSLETTER

Welcome to the May edition of the BSOA newsletter

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Dear Members,

We welcome another summer and the recharging of wellbeing batteries, I welcome you to have a look at our new look to the BSOA Newsletter. We have introduced a Registrar article column. This summarises papers relevant to Peri-operative care for orthopaedic procedures. Our tax advice column continues, and we encourage the submission of articles and letters which we will consider including in future newsletters.

Our Annual scientific meeting on the 11th & 12th November 2024 in Birmingham, will include:

Sessions in: Human factors and wellness, Photo-biomodulation, Challenging new guidance, Registrar prize meeting, Technology change, Sustainability, Clinical optimisation, Regional Anaesthesia and

Workshops in: One lung ventilation, Radiology for Anaesthetists, Regional anaesthesia (5 elements covered). We are considering adding workshops on Start-up advice and Financial advice but await feedback as to the usefulness of doing so.

Over the next few weeks, we will send out speaker profiles both on LinkedIn and Tweets via X.

I look forward to seeing you there.

Very best wishes

DREDASILVA

Dr EJ da Silva
President of the BSOA

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TRAINEE ARTICLE COLUMN

Updates in Orthopaedic Anaesthesia
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Peripheral Regional Anaesthesia in orthopaedic surgery – a brief look at the evidence base for the last decade

As the use of peripheral regional anaesthesia increases globally, and particularly within anaesthesia for orthopaedic surgery, one must consider if the evidence base and outcomes supports its growing practice. A centenary review article published in the British Journal of Anaesthesia evaluated outcomes in peripheral regional anaesthesia compared to systemic analgesia over the past decade by looking at relevant published randomized controlled studies and other comparative trials for the period 2013-2023. The narrative review also compares their findings to a prior review article looking at studies in peripheral regional anesthesia in the decade prior.1 Here we highlight the salient points with greatest relevance to orthopaedic anaesthesia.

Shoulder Surgery Shoulder surgery (9 RCTs with n=733; 4 non-RCTs with n-151)2-14 has been the primary indication for much of the research on the Interscalene Brachial Plexus Block (ISB), which historically has been the most extensively researched regional anaesthetic technique. Post operative pain was shown to be reduced in 6 RCTs (n=393) 5,7,8,10,11,14 and 3 non-RCTs (n=693)2,9,13 and equivocal in 1 retrospective cohort study (n=151)3. In one RCT (n=66)12, initial pain was improved but then increased at 72 hours. The data in this review also suggest reduced length of stay in PACU6, shorter hospitalization time10. Additionally, the

complication rate has fallen in the last decade compared to the prior decade worth of data1, which is likely attributed to the wider use of ultrasound guided techniques.

Surgery to the upper limb With regards to upper limb surgeries, there has been a lack of published RCT data on peripheral regional anaesthesia for elbow surgery in the last decade. For distal radial fracture fixations, one study (n=88)15 suggested that supraclavicular block led to a high conversion rate to general anaesthesia (16%); contrasting with another study (n=52)16 detailing the infraclavicular block with a 3.8% conversion to general anaesthesia.

Hip Surgery There were 7 RCTs (n=812)17-22 and six non RCTs (n=1915)23-28 in the last decade that looked into femoral nerve block for hip surgery. There is significant variance in the data for post op analgesia, which may be explained by the fact that the anterior hip capsule is also innervated by obturator and accessory obturator articular branches. The data indicates reduced post operative nausea and vomiting (PONV)23-24, and length of stay in PACU19, and reduced time to mobilsation27-28. Compared with systemic analgesia, there was no significant difference in post op delirium20,23, length of hospital stay. One study reported a higher incidence of falls22, likely due to the motor weakness effects of femoral nerve block.

Knee surgery Total knee arthroplasty seems to have been the major indication for femoral nerve block, as seen in 8 RCTs (n=1223)29-36 and 5 non-RCTs (n=259 245)38-41. The large majority of which show reduced post operative pain scores and systemic analgesia requirements. Anterior cruciate ligament (ACL) repair was seen in 5 RCTs (n=212)42-46 and 2 non-RCTs (n=303)47,48 where femoral nerve block was used. 2 of the 5 RCTs showed positive analgesic effect42,43, while the remaining 3 did not show any significant difference. No differences in functional recovery were reported, and again falls were reported with this block post-operatively.

18 RCTs (n=1055) and 6 non-RCTs (n=2319) investigated Saphenous Nerve Block55-77, the majority the studies (n=22) using ultrasound guidance. 10 RCTS (n=612) and 6 non-RCTS (n=2319) involved knee arthroplasty; 3 RCTS (n=139) involved ACL repair surgery, and 4 RCTS (n=267) involved arthroscopic knee surgery. There was wide variance in the anaesthetic practice, ranging from GA/spinal +/- local anaesthetic infiltration. The majority of the studies demonstrated a positive analgesic effect for arthroplasty, but limited improvements in arthroscopic surgery. The data suggests for early in-hospital functional recovery, with similar incidences of adverse effects to use of systemic analgesia, and no documentation of complications of falls, thus making this an arguably better choice than femoral nerve block for knee surgery.

Surgery to the lower limb Sciatic nerve blocks have had a significant reduction in published studies (23 RCTs 2003-2013 vs 3 RCTs 2013-2023)1. Early research into sciatic nerve blocks were indicated for knee surgery. However, in recent years the evidence base has extended out to foot and ankle surgery, as well as for traumatic amputation. Where it has been investigated for lower limb surgery, it does appear to give sufficient analgesia, however there is a clear trend towards motor sparing blocks.

Conclusion There is a large body of literature for peripheral nerve blocks (2003-2023), but despite this, there appears to be a discordance of what are key primary outcome measures,

thereby making comparative analysis between studies difficult. There is a clear trend to towards motor sparing blocks, and the increasing use of ultrasound guided regional anaesthesia. The ISB continues to be an efficient technique for shoulder surgery; the saphenous nerve block is the preferred technique for knee surgery; and there is little place for femoral nerve block in hip surgery or knee surgery. There is a void of RCT studies for more novel regional anaesthesia blocks, including superior trunk blocks, the Pericapsular End Nerve Group (PENG), superior inguinal approach to the fascia iliaca (SIFI) and the interspace between popliteal artery and knee capsule (iPACK) Block.

Taking a closer look at hip fracture surgery for older patients and the age-old question: Regional or General anaesthesia?


SYSTEMATIC REVIEW Open Access

Regional versus general anesthesia in older patients for hip fracture surgery: a systematic review and meta-analysis of randomized controlled trials

Sheng-Liang Zhou[1†], Shao-Yun Zhang[1,2†], Hai-Bo Si[1] and Bin Shen[1*]

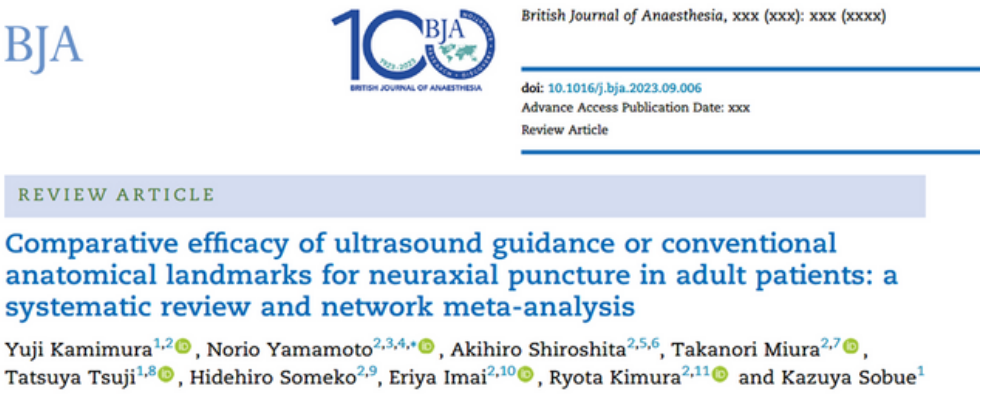
As the global population continues to shift towards the aged, there will be an increasing incidence of hip fractures, with expected numbers to reach 4.5 million worldwide in 205050. Almost all hip fracture patients are offered surgical fixation, and thus will require anaesthesia. However, there is yet to be a consensus on the optimal anaesthetic technique.
Here we take a look at the findings of a systemic review and metanalysis of randomised controlled trials, between 2002-2022, looking at regional anaesthesia compared to general anaesthesia for hip fracture surgery (S-L Zhou et al 2023)49. 13 studies (n=3736; GA=1855; RA=1851) were included in this study, 11 of which applied spinal anaesthesia as the sole technique, and 2 studies applying spinal anaesthesia with sedation.
Primary outcomes 7 studies reported on the incidence of delirium as a primary outcome. The metanalysis showed that there was no significant difference (OR 1.09; 95% CI 0.86,
1.37, P = 0.46, n = 2747) compared with general anaesthesia. 6 RCT studies reported on 30-day mortality, with the meta-analysis finding no significant difference between the two groups (OR 1.08; 95% CI 0.71, 1.64, P = 0.71, n = 3249). A 2019 retrospective cohort study (Malhas et al) suggested RA increased 30 day mortality51, supported by a 2014 Cochrane review by J Guay et al52. However, recent meta-analyses by Zheng et al (2020)53 and CM O'Donnell (2018)54 also describes no statistical significance in this outcome measure.

Secondary outcomes Other reported measures within the meta-analysis included intraoperative and post operative outcomes. Of statistical significance, though low grade evidence, length of operation within the GA group was longer, and had greater intraoperative blood loss49. There was moderate grade evidence within 4 studies that GA had higher post

operative pain scores49; and low grade evidence within 2 studies to suggest GA group had higher incidence of acute kidney injury post op49. There was low grade evidence to demonstrate no significant differences in length of stay in hospital, and post op complications such as DVT, pneumonia, or myocardial infarction.

Conclusion Regional anaesthesia by way of neuroaxial techniques was not shown to significantly reduce post operative delirium or 30 day mortality in this meta-analysis. Although the evidence base is of low grade, it is possible that RA could reduce intraoperative blood loss, operative time, post operative pain, and risk of AKI. This analysis focused on central regional anaesthetic techniques, but as peripheral nerve block techniques such as pericapsular end nerve group (PENG) for hip fracture surgery continues to emerge, there lies potential for RCTs in this domain and join the controversial topic of regional or general anaesthesia for hip fracture surgery.

Is the performance of landmark neuraxial techniques out-dated when US guidance is now so easily available?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Review Article

REVIEW ARTICLE

Comparative efficacy of ultrasound guidance or conventional anatomical landmarks for neuraxial puncture in adult patients: a systematic review and network meta-analysis

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We are always trying to develop our anaesthetic practice to be safer and more efficient. The universal availability of ultrasound machines has been found to have had a positive impact on the safety profile of central venous cannulation78 and regional anaesthesia79. Despite this, the landmark technique is often the primary approach for a neuraxial procedure. We ask the question: are we doing patient's a disservice by not employing the tools we have readily available, which may improve success rates and patient satisfaction? A systematic review and network meta-analysis published in the British Journal of Anaesthesia in October 2023 looked to compare the efficacy of US guidance against the conventional anatomical landmarks for neuraxial puncture in adults80. In this publication, a search was done for RCTs comparing the two approaches using an electronic databases and unpublished studies. 74 eligible studies were found with 7090 patients. The three different types of US guidance were pre-procedural guidance, real-time US guidance computer-aided three-dimensional image neuraxial US. There was a paucity of comparisons between the 3 different guidance methods, whereas they were all compared indvidually with the anatomical landmark technique.

Primary outcomes The primary outcomes were described as first pass (no redirection required) success and patient satisfaction. Compared with the landmark approach, pre-procedural and real time US guidance likely increased first pass success (RR 1.6; 95% CrI 1.3–1.9 and RR 1.9; 95% CrI 1.3–2.9). Compared with landmark approach, pre-procedural US guidance may improve patient satisfaction (SMD 0.28; 95% CrI 0.092–0.47), whereas the other two approaches are likely to have little-to-no difference in patient satisfaction.

Secondary outcomes The secondary outcomes included first attempt success (redirection included), procedure time and adverse attempts. First time success is likely to be increased when real-time US guidance is used compared to the landmark approach (RR 1.5; 95% CrI 1.1–2.1), and pre-procedural US guidance and computer aided 3D US might also do the same (RR 1.4; 95% CrI 0.89–2.4 and RR 1.4; 95% CrI 1.2–1.6). Pre-procedural US guidance approach showed there was likely to be no difference in procedural time compared to the anatomical landmark approach (MD 0.52; 95% CrI –0.37 to 1), and C-aided and real time US guidance showed there may not be any difference in procedural time (MD 0.65; 95% CrI –3.2 to 4.6 and MD 0.56; 95% CrI –1.7 to 2.8)

Conclusion The authors conclusions support the use of US guidance for neuraxial procedures, stating that the preferred method would be pre-procedural US guidance as their analysis supported a significant increase in patient satisfaction, as well as increasing first pass success. It should be noted that the evidence they provided, in their own words at best, gave conclusions with moderate confidence values.

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British Society of Orthopaedic Anaesthetists

ANNUAL SCIENTIFIC MEETING PROGRAMME

DAY 1 – MONDAY 11TH NOVEMBER 2024

TIME	PROGRAMME / ROOMS	FACULTY
09:15-09:55	**REGISTRATION** **WELCOME REFRESHMENTS - Atrium**	
09:55-10:00	Welcome	Dr E J da Silva
10:00-11:30	**SESSION 1: HUMAN FACTORS AND WELLNESS**	**Chair: Dr Tim Moll**
10:00-10:30	Human factors and systems thinking in Orthopaedic anaesthesia. RCOA CPD Matrix Code: 1I03, 3A08, 3J00	Dr Annie Hunningher
10:30-11:00	Human Factors in theaters- a surgical perspective RCOA CPD Matrix Code: 1I03, 3J00	Mr James Tomlinson
11:00-11:30	Maximising your wellness at work RCOA CPD Matrix Code: 1H02	Dr Toni Brunning
11:30-12:30	**AFTERNOON SYMPOSIUM: Sponsored by Thor Medical**	**Chair: Dr Bethany Fitzmaurice**
	Photobiomodulation, nerve injury recovery and chronic pain. Should we include it in the BSOA Care bundle for nerve injury? RCOA CPD Matrix Code: IA02, 2E03, 2G04	Dr James Carroll & Dr Arasu Rayen
12:30-13:30	**LUNCH**	
13:30-15:30	**WORKSHOPS** RCOA CPD Matrix Code: 2A01, 2G01, 2G02, 2G03, 3A01, 3A09 **Workshop A:** Lower Limb Blocks **Workshop B:** Upper Limb Blocks **Workshop C:** ESP / Neuroaxial **Workshop D:** PECS 1 & 2, Rectus Sheath & TAP Blocks - Regional Anaesthesia **One Lung Ventilation** (EJ Da Silva)	**Chair: Dr M Hulgur**
15:30-16:15	**REFRESHMENTS**	
16:15-17:45	**SESSION 2: NEW GUIDANCE IN ANAESTHESIA PLANNING AND QUERIES**	**Chair: Prof Anil Hormis**
16:15-16:45	CPOC guidelines- Obstructive sleep apnoea, what it means for Orthopaedics RCOA CPD Matrix Code: 2A03, 2A07	Dr Kim Russon
16:45-17:15	Are we aiming for the correct HBA1C targets in Optimising patients for surgery? RCOA CPD Matrix Code: 2A03, 2A07	Prof Wasim Hanif
17:15-17:45	Airway management in patients with suspected or confirmed cervical spine injury -**2024 Multi-Society Guidance UK** RCOA CPD Matrix Code: 2A01, 2A02, 2F02, 3A01, 3A08, 3F00	Dr Matthew Wiles
18:00	**WINE RECEPTION**	

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British Society of Orthopaedic Anaesthetists

ANNUAL SCIENTIFIC MEETING PROGRAMME

DAY 2 – TUESDAY 12TH NOVEMBER 2024

TIME	PROGRAMME / ROOMS	FACULTY
08:00-08:30	**REGISTRATION** **WELCOME REFRESHMENTS - Atrium**	
08:30-09:30	**SESSION 1: REGISTRAR PRIZE MEETING & EXHIBITIONS**	**Chairs: Dr Svetlana Galitzine & Dr Liana Geary**
	Oral Presentations & Poster Presentations RCOA CPD Matrix Code: 1H02, 3J02, 3J03	
09:30-09:45	**REFRESHMENTS**	
09:45-10:15	**PRESIDENTS MEDAL LECTURE**	**Chair: Dr E J da Silva**
09:45-10:15	A Review: Perioperative care in Metastatic Bone disease. RCOA CPD Matrix Code: 2A03, 2A07, 3I00	Dr Rachel Baumber
10:15-11:45	**SESSION 2: EMBRACING TECHNOLOGY AND REVOLUTIONARY CHANGE**	**Chair: Dr Ramesh Vijayaraghavan**
10:15-10:45	Digital stethoscopes and significant murmurs. Reduce ECHO requests? RCOA CPD Matrix Code: 2A03, 3J03	Dr Ronan Baird
10:45-11:15	Ambulatory Arthroplasty Surgery: a revolution in supporting elective recovery RCOA CPD Matrix Code: 2G01, 3A06, 3A08	Dr Mary Stocker
11:15-11:45	Intra-operative Nociception monitoring – an introduction RCOA CPD Matrix Code: 2A04	Prof Anil Hormis
11:45-12:45	**AFTERNOON SYMPOSIUM : Sustainability in Healthcare**	**Chair: Dr Paul Southall**
	Enabling responsible growth of the healthcare sector: an understanding of key trends, priorities and needed actions	Christine Diamente, BSR
12:45-13:30	**LUNCH**	
13:30-15:00	**SESSION 3: CLINICAL OPTIMISATION, PREPARATION AND AVOIDING COMPLICATIONS**	**Chair: Dr Liana Geary**
13:30-14:00	The power of self-preparation for surgery RCOA CPD Matrix Code: 2A03, 3I00	Dr Toni Brunning
14:00-14:30	Understanding Hyponatremia in the peri-operative setting. RCOA CPD Matrix Code: 2A07	Dr Martin Goodman
14:30-15:00	Cognitive dysfunction and Peri-operative care- Updates RCOA CPD Matrix Code: 2A07, 3I00	Dr Helen Chamberlain
15:00-15:15	**REFRESHMENTS**	
15:15-16:45	**SESSION 4: REGIONAL ANAESTHESIA & CHRONIC PAIN**	**Chair: Dr Svetlana Galizine**
15:15-15:45	Awake Shoulder Surgery RCOA CPD Matrix Code: 2E01, 2G01, 2G02, 2G03, 3A08, 3A09	Dr Nigel Bedforth
15:45-16:15	Persistent post-operative surgical pain RCOA CPD Matrix Code: 2E01	Dr Bernadette Ratnayake
16:15-16:45	Regional Anaesthesia options for Spine surgery RCOA CPD Matrix Code: 2E01, 2G01, 2G02, 2G03, 3A08, 3A09	Dr J.C John. Oswestry
16:45-17:00	**REGISTRAR PRIZE AWARDS, CHANGE OF OFFICE BEARERS & CONCLUSION**	**Chair: Dr E J da Silva**

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ACCOUNTANT ADVICE COLUMN

Budget Summary and Corporation Tax Changes

2024 Budget Summary
High Income Child Benefit Charge

The government is increasing the income threshold at which HICBC starts to be charged from £50,000 to £60,000 from April 2024. The rate at which HICBC is charged will be halved from 1% of the Child Benefit payment for every additional £100 above the threshold to 1% for every £200. This means that Child Benefit will not be withdrawn in full until individuals have 'adjusted net income' of £80,000 or more.

Individual Savings Accounts

The government announced that it is looking to introduce the UK ISA. This will have a new ISA allowance of £5,000 in addition to the existing ISA allowance, and will provide a new tax-free savings opportunity for people to invest in the UK.

National Insurance contributions

Following the Autumn Statement in 2023 the government cut the main rate of Class 1 employee NICs from 12% to 10% from 6 January 2024. The government has further cut the main rate of Class 1 employee NICs from 10% to 8% from 6 April 2024.

The self-employed generally have to pay two forms of NICs: Class 2 and Class 4. Firstly, the government will amend Class 2 self-employed NICs from 6 April 2024. This means that, from 6 April 2024: Self-employed people with profits above £6,725 will continue to get access to contributory benefits, including the State Pension, through a National Insurance credit, without paying NIC. Those with profits under £6,725 and others who pay Class 2 NICs voluntarily to get access to contributory benefits including the State Pension will continue to be able to do so.

The VAT registration threshold

After many years of having been frozen, the government will increase the VAT registration threshold from £85,000 to £90,000 and the deregistration threshold from £83,000 to £88,000 from 1 April 2024. The government has stated that these new thresholds will be frozen but has not stated for how long.

CGT annual exemption

The government has announced that the CGT annual exempt amount will be reduced from £6,000 to £3,000 from 6 April 2024.

Tax on savings income

Currently, the first £1,000 of dividends is chargeable to tax at 0% (the Dividend Allowance). This will be reduced to £500 for 2024/25.

The Savings Allowance applies to savings income and the available allowance in a tax year depends on the individual's marginal rate of income tax Broadly, individuals taxed at up to the basic rate of tax have an allowance of £1,000. For higher rate taxpayers the allowance is £500. No allowance is due to additional rate taxpayers. Savings income within the allowance still counts towards an individual's basic or higher rate band and so may affect the rate of tax paid on savings above the Savings Allowance. Some individuals qualify for a 0% starting rate of tax on savings income up to £5,000. However, the rate is not available if taxable non-savings income (broadly earnings, pensions, trading profits and property income, less allocated allowances and reliefs) exceeds £5,000.

Non-UK domiciled individuals

From 6 April 2025, the current remittance basis of taxation for non-UK domiciled individuals will be abolished and replaced with a residence-based regime. Individuals who opt into the new regime will not pay UK tax on any foreign income and gains arising in their first four years of tax residence, provided they have been non-tax resident for the last ten years. Anyone who has been tax resident in the UK for more than four years will pay UK tax on their foreign income and gains.

Changes to Corporation Tax

From the 1st April 2023 there were two key changes which will affect the amount of corporation tax payable.

Firstly, the corporation tax rate has increased from 19% to 25%, applying to companies whose profits exceed £50,000. This threshold is split between any associated companies, therefore it is essential to identify them and plan for a potential increase in tax payable.

Example:

The simplest way to calculate Corporation Tax is to apply 19% to the first £50,000 in taxable profit, and 26.5% to anything between £50,000 and £250,000.

As an example, a company with a taxable profit of £100,000 will have a Corporation Tax liability of £22,750 (at an effective rate of 22.75%) calculated as follows:

	Taxable Profits	% Rate	Tax
Profits up to lower limit	£50,000	x 19%	£9,500
Remaining profits	£50,000	x 26.50%	£13,250
Effective rate / Total due		22.75%	£22,750

The graph above illustrates the effective Corporation Tax rate for companies with profits between £50,000 and £250,000 over a 12-month accounting period. If the accounting period is less than 12 months, the lower and upper limits are reduced by time apportionment. For example, for a 9-month accounting period they will be £37,500 and £187,500.

Secondly, 'Associated Company' rules are reintroduced for periods beginning on or after 1st April 23.

Basic Rules For Associated Companies

The basic rule is that a company is an **associated company** of another at any time when:
1. One of the companies has **control** of the other; or
2. Both companies are controlled by the same person or group of persons

If a company is another's associated company at **any time** in an accounting period, it is that company's associated company in that accounting period.

Family-owned businesses are likely to fall within the new rules, as an individual's 'associates' need to be considered.

Generally, a person's associates include but are not limited to, spouse/civil partner, business partner and other lineal relatives.

However, exemptions are likely to apply such as the commercial independence exemption which considers the financial, economic and organizational independence of the companies.

EXAMPLE

Example Ltd has profits of £100,000 for the year ended 31 March 2024. It has one associated company.

The lower limit is £25,000 (£50,000 / 2) and the upper limit is £125,000 (£250,000 / 2). Therefore, the company pays tax at the main rate with marginal relief given.

The company's corporation tax liability may be calculated as follows:

	Taxable Profits	% Rate	Tax
Profits up to lower limit	£25,000	x 19%	£4,750
Remaining profits	£75,000	x 26.50%	£19,875
Effective rate / Total due		24.625%	£24,625

The effective rate of tax is 24.625% (£24,625 / £100,000).

Control by minimum controlling combination

For companies to be associated companies under the new rules, there has to be the same 'minimum controlling combination'. Suppose two companies have the following shareholdings:

	A Ltd	B Ltd
Mr X	55%	35%
Mrs Y	30%	35%
Others (unrelated)	15%	30%

Mr X and Mrs Y can together control A Ltd and B Ltd. However, Mr X controls A Ltd on his own and is therefore the 'minimum controlling combination'. The minimum controlling combination of B Ltd is Mr X and Mrs Y. Since the companies do not have the same minimum controlling combination, they are not related.

Overall, the Associated Company rules add a layer of complexity that needs to be considered based on the fact pattern of any given scenario.

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For further information or for a free initial consultation to discuss your tax affairs please contact Andrew Fenton (Director at AF Tax Solutions Ltd) on 01323 845083 or email andrew@aftax.co.uk.

Andrew is a Chartered Tax Adviser (and a former Inspector of Taxes with HMRC) and has many years of experience in dealing with the tax affairs of medical professionals.

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British Society of Orthopaedic Anaesthetists

SAVE THE DATE

Monday 11th & Tuesday 12th November

BIRMINGHAM 2024

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