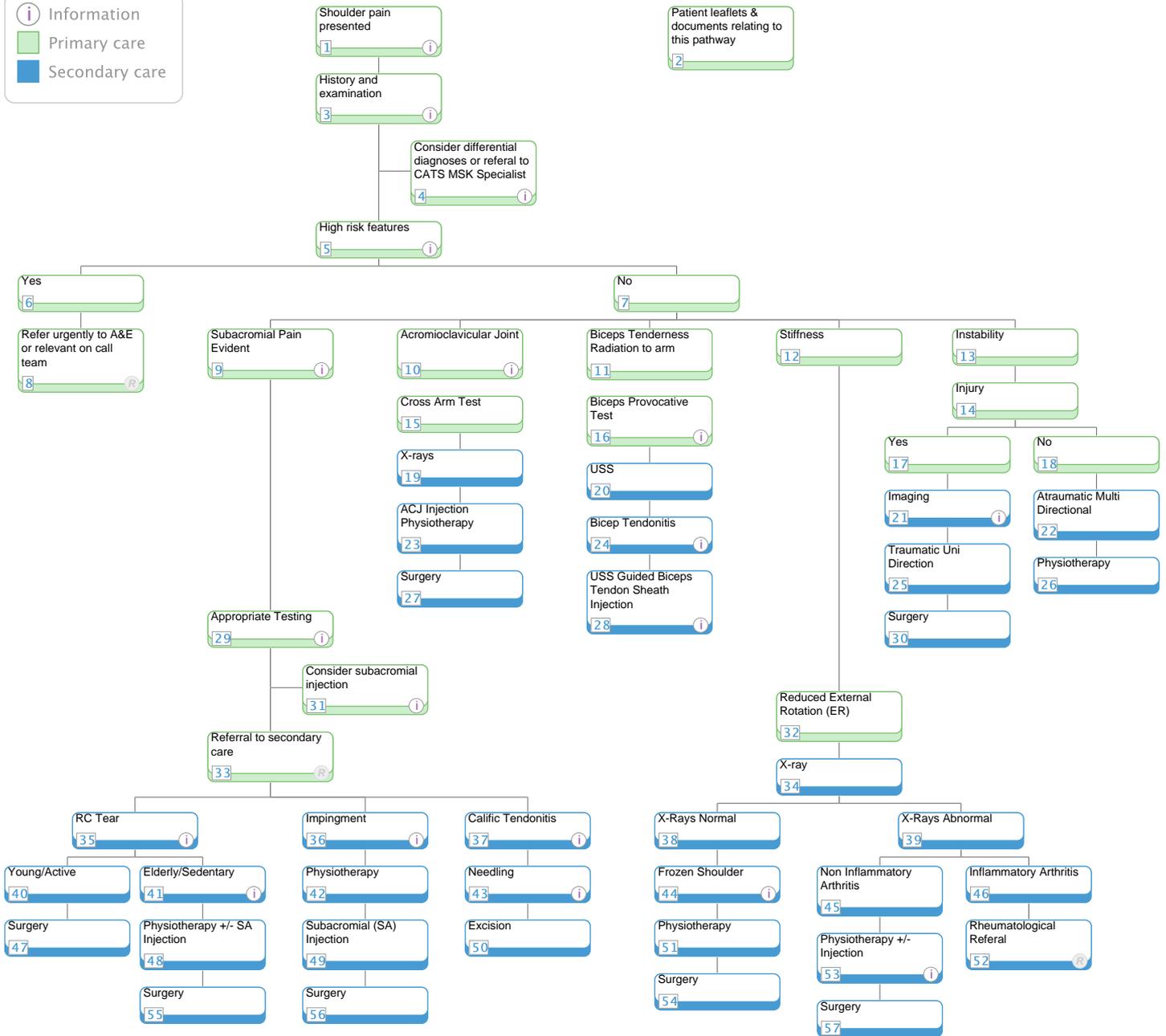


Shoulder pain

Surgery > Orthopaedics > Shoulder pain

i Information
 Primary care
 Secondary care



Shoulder pain

Surgery > Orthopaedics > Shoulder pain

1 Shoulder pain presented

Quick info:

Scope:

- this pathway covers the care and management of adults and adolescents with:
 - acute and chronic shoulder pain
 - biceps tendonitis
 - calcific tendonitis
 - frozen shoulder (adhesive capsulitis)
 - glenohumeral joint arthritis
 - acromioclavicular joint osteoarthritis (OA)
 - impingement syndrome
 - rotator cuff tear
 - instability
- this pathway does not include adults or children with:
 - fractures or dislocations
 - pain or OA of joints other than the shoulder
 - conditions resulting in referred pain to the shoulder, eg. cervical spine, cardiovascular or gastrointestinal causes
 - septic arthritis, tumours or inflammatory conditions, such as rheumatoid arthritis
 - neurological disorders or hemiplegic shoulder pain

Incidence or prevalence:

- the lifetime prevalence of shoulder pain in adults is approximately 10%
- in the general population, it is the third most common type of musculoskeletal pain after neck and low back pain

Prognosis:

- approximately 40% of new episodes of shoulder pain resolve without treatment within 3 months of onset
- approximately 50% of people who have received conservative treatment for acute shoulder pain, will recover within 6 months

References:

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

3 History and examination

Quick info:

History

- age of patient
- occupation and whether patient is right or left handed
- nature of symptoms:
 - pain or tenderness
 - stiffness
 - weakness
 - loss of range of movement
 - numbness or altered sensation
- onset and duration of symptoms
- location of pain (eg. upper arm, anterior shoulder, superior shoulder, interscapular)
- intensity of pain

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

- exacerbating or relieving factors
- presence of night pain
- any recent trauma or injury (eg. a fall resulting in a fractures or dislocations)
- precipitating factors, such as sporting participation or occupational repetitive motion
- effect of pain and/or restricted movement on activities of daily living
- previous history of joint problems or injury (eg. trauma, dislocation, subluxation)
- presence of systemic symptoms, eg. fever, abdominal or cardiovascular pain
- past medical history:
 - comorbidity
 - previous malignancy
- current medication or treatments for other conditions

Perform bilateral examination of the shoulders and assess the following:

- inspection:
 - posture and symmetry of both shoulders
 - obvious deformity, bruising or swelling
 - muscle atrophy
 - previous surgical scars
- palpation:
 - swelling or malformation
 - tenderness particularly of the bursa, scapula spine, glenohumeral and acromioclavicular (AC) joints, greater tuberosity of the humerus and long head of the biceps
- assess full active and passive range of movement:
 - flexion and extension
 - abduction and adduction
 - internal and external rotation
 - scapula movement
- tests for impingement and instability of the shoulder joint:
 - magnetic resonance (MR) arthrography used to confirm diagnosis
 - perform neurological assessment of the cervical spine and motor and sensory abilities of the arm

NB: There is no evidence that any single test alone is specific and reliable for the diagnosis of shoulder pain and injury.

References:

American Academy of Orthopaedic Surgeons (AAOS). AAOS clinical guideline on shoulder pain. Rosemont, IL: AAOS; 2001. New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Dimnes J, Loveman E, McIntyre L et al. The effectiveness of diagnostic tests for the assessment of shoulder pain due to soft tissue disorders: a systematic review. Health Technol Assess 2003; 7: 1-185.

4 Consider differential diagnoses or referral to CATS MSK Specialist

Quick info:

Differential diagnoses include:

- referred pain – from neck, chest or abdomen
- dislocation or fracture at the glenohumeral joint or acromioclavicular separation
- septic arthritis
- polymyalgia rheumatica (see 'Polymyalgia rheumatica' pathway)
- osteoarthritis of glenohumeral or acromioclavicular joints

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

- inflammatory arthritis (rheumatoid arthritis or gout)
- subacromial bursitis or rotator cuff tendonitis
- frozen shoulder (adhesive capsulitis)
- calcific tendonitis
- biceps tendon rupture
- tumour

If confidence level is high, then referral to secondary care could be appropriate, however if confidence is low a referral to CATS MSK Specialist could be an option.

References:

American Academy of Orthopaedic Surgeons (AAOS). AAOS clinical guideline on shoulder pain. Rosemont, IL: AAOS; 2001.

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Dinnes J, Loveman E, McIntyre L et al. The effectiveness of diagnostic tests for the assessment of shoulder pain due to soft tissue disorders: a systematic review. Health Technol Assess 2003; 7: 1-185.

5 High risk features

Quick info:

High risk features include:

- possible fractures or dislocations
- unusual deformity, swelling or joint effusion
- penetrating injury
- symptoms and signs suggestive of septic arthritis, eg. fever or chills, hot swollen joint
- sudden onset of loss of range of motion
- previous history of cancer or suspected malignancy
- referred pain from chest (cardiac related shoulder pain), abdomen or spine
- sensory or motor deficits or significant weakness without pain
- neurovascular compromise

NB: Refer for appropriate specialist assessment if high risk features are present.

References:

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

9 Subacromial Pain Evident

Quick info:

- Neers test
- Hawkins Test
- Rotator Cuff Power
- Movement and arc of pain

10 Acromioclavicular Joint

Quick info:

Published: 30-Oct-2009 Valid until: 31-May-2011 Printed on: 28-Jun-2011 © Map of Medicine Ltd

This care map was published by . A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

Quick info;

- Cross Arm test
- X-rays

Contact Consultant via e-mail (nhs.net only) stating patient condition, asking if Consultant wishes to see patient at this point.

16 Biceps Provocative Test

Quick info:

The patient is assessed in sitting with their arm in 90-100° abduction. The arm is passively externally rotated maximally with the forearm in maximum pronation or supination.

Reported as positive when pain is provoked only in the pronated position or when pain is more severe in this position.

21 Imaging

Quick info:

- x-rays
- MR Arthrogram

24 Bicep Tendonitis

Quick info:

Biceps tendonitis:

- is inflammation of the biceps tendon where it passes through the bicipital groove of the anterior humerus
- can be caused by injury, overuse or as part of aging as the tendons lose elasticity
- symptoms include anterior shoulder and humeral pain
- pain is aggravated by lifting, or reaching overhead
- pain can be directly localised to the bicipital groove
- diagnosis is confirmed if an anaesthetic block of the bicipital groove alleviates symptoms
- administering physio could aide recovery, in conjunction with Tendon Sheath Injection

Reference:

Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.

28 USS Guided Biceps Tendon Sheath Injection

Quick info:

Injections should only be performed under ultrasound guidance, to prevent inadvertent injections into the tendon substance.

29 Appropriate Testing

Quick info:

Consider the following investigations to confirm diagnosis

- Neers test
- Hawkins Test
- Rotator Cuff Power
- Movement and arc of pain

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

There are no established clinical rules for deciding upon the necessity of shoulder X-ray

- suggested indications include:
 - any suspected fracture
 - pre-reduction imaging in a dislocation of patient over age 40 years
 - suggested joint pathology, eg degenerative change
- the decision for X-ray should ultimately be based upon clinical judgement
- consider the following views as indicated by initial examination:
 - anterior-posterior view in 0° external rotation
 - lateral view in scapular plane
 - axillary view
- ultrasound may also prove useful
- magnetic resonance image (MRI) and arthrography are not typically used for an initial evaluation

References:

American Academy of Orthopaedic Surgeons (AAOS). AAOS clinical guideline on shoulder pain. Rosemont, IL: AAOS; 2001.

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

31 Consider subacromial injection

Quick info:

Ensure Rotator Cuff tear excluded either clinically or by imaging. Consider the following investigations to confirm diagnosis:

- ultrasound scan
- X-rays:
 - perform shoulder series X-rays, including:
 - anteroposterior
 - axillary (or axial)
 - Supraspinatus Outlet view
 - Stryker view
 - if patient unable to do axillary view due to pain or stiffness – request scapula-Y view
 - examine X-rays for:
 - any calcification of chronic tendonitis
 - a high riding humeral head due to the loss of interposing structures between acromion and humeral head, suggesting rotator cuff tear or chronic cuff degeneration
 - osteoarthritis of acromioclavicular joint
 - Glenohumeral arthritis
- consider blood tests only if an underlying inflammatory condition is suspected

References:

Clinical Knowledge Summaries (CKS). Shoulder pain. Newcastle upon Tyne: CKS; 2008.

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.

Dinnes J, Loveman E, McIntyre L et al. The effectiveness of diagnostic tests for the assessment of shoulder pain due to soft tissue disorders: a systematic review. Health Technol Assess 2003; 7: 1-185.

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

Efficacy and safety of corticosteroid injections and other injections for management of tendinopathy: a systematic review of randomised controlled trials: The Lancet, Volume 376, Issue 9754, Pages 1751 - 1767, 20 November 2010 [http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(10\)61160-9/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(10)61160-9/fulltext)

35 RC Tear

Quick info:

Rotator cuff tears:

- can be painless or painful
- most patients have a longstanding history of painful shoulder condition, such as impingement syndrome or subacromial bursitis
- are related to repetitive use of the rotator cuff and therefore incidence increases with age; they are relatively rare before age 35 years
- occasionally tendon tear can be caused by acute trauma, sprain or sudden jerking injury to the shoulder
- may be partial or full thickness

Risk factors include:

- subacromial spurs or impingement syndrome
- osteoarthritic thickening of the acromioclavicular joint
- systemic inflammatory conditions of the shoulders, such as rheumatoid arthritis or gout
- prolonged, excessive or unaccustomed use of the shoulder in the impingement position

References:

American Academy of Orthopaedic Surgeons (AAOS). AAOS clinical guideline on shoulder pain. Rosemont, IL: AAOS; 2001. New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.

36 Impingement

Quick info:

Impingement syndrome:

- resulting from compression upon shoulder flexion and internal rotation of the rotator cuff (typically the supraspinatus tendon) or swollen subacromial bursa, between the lateral portion of acromion and the head of the humerus
- tendons become trapped leading to compression, inflammation and damage
- can lead to rotator cuff tendonitis
 - is caused by:
 - injury
 - general wear and tear
- an occupational or sporting activity requiring repetitive use of the shoulder (eg tennis or cricket)

The symptoms and signs of impingement syndrome, rotator cuff tendonitis and subacromial bursitis are similar and include:

- pain and tenderness to upper arm, subacromial space and lateral deltoid
- night pain
- pain with upward reaching movements
- reduced shoulder strength, especially abduction and external rotation in the presence of a tear
- possible muscular atrophy
- usually a full range of passive movement but limited active movement due to pain and rotator cuff weakness
- may be reduced range of movement in the presence of a rotator cuff tear or adhesive capsulitis
- low painful arc of motion with maximum pain at 60-120° is typical for impingement

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

- inability to maintain painful arm at 90° angle when arm is passively abducted and then released indicates possible tendon rupture

References:

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.

37 Calcific Tendonitis

Quick info:

Calcific tendonitis:

- occurs in adults age 30-50 years
- is caused by the deposition of calcium phosphate crystals onto the supraspinatus tendon of the rotator cuff
- may be mild, chronic pain interspersed with episodes of acute, severe shoulder pain and inflammation, interspersed with sporadic pain down the arm or up into the neck
- pain increases in severity with movement and at night
- other symptoms include stiffness and weakness of the shoulder joint
- during the acute phase, the joint is usually too painful to allow examination
- X-rays may show calcium deposits in soft tissue

Reference:

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

41 Elderly/Sedentary

Quick info:

Consideration to treatment via CATS ought to be given, also question if patient is suitable for surgery or not.

43 Needling

Quick info:

The provision of self help physio advice is optional here, THT Physion Dept have leaflets that could be given to the patient.

44 Frozen Shoulder

Quick info:

Frozen shoulder (adhesive capsulitis):

- clinical features include:
 - pain and stiffness, but no local tenderness
 - loss of both active and passive range of movement in all planes
 - patient reports difficulty with movements such as scratching back, putting on a coat, combing hair etc
 - common in people over age 40 years
 - 15% of patients have bilateral disease
 - patients with rotator cuff tendonitis have similar presentation, but restriction is mainly due to pain rather than an absolute loss of movement
 - early and accurate diagnosis is crucial
- is usually a self-limiting and reversible condition
- may be idiopathic or secondary to an underlying condition, such as:

Published: 30-Oct-2009 Valid until: 31-May-2011 Printed on: 28-Jun-2011 © Map of Medicine Ltd

This care map was published by . A printed version of this document is not controlled so may not be up-to-date with the latest clinical information.

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

- rotator cuff tendonitis
- bursitis
- a fracture of the neck of the humerus

References:

American Academy of Orthopaedic Surgeons (AAOS). AAOS clinical guideline on shoulder pain. Rosemont, IL: AAOS; 2001.

New Zealand Guidelines Group (NZGG). The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: NZGG; 2004.

Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.

Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.

53 Physiotherapy +/- Injection

Quick info:

- repeat surgery is not an option

Shoulder pain

Surgery > Orthopaedics > Shoulder pain

Key Dates

Published: 30-Oct-2009, by

Valid until: 31-May-2011

Evidence summary for Shoulder pain

References

This is a list of all the references that have passed critical appraisal for use in the care map Shoulder pain

ID Reference

- 1 American Academy of Orthopaedic Surgeons. AAOS clinical guideline on shoulder pain. Rosemont, IL: American Academy of Orthopaedic Surgeons; 2001.
- 2 Australian Acute Musculoskeletal Guidelines Group. Acute Shoulder Pain. Canberra: National Health and Medical Research Council; 2003.
- 3 Brigham and Women's Hospital. Upper extremity musculoskeletal disorders. A guide to prevention, diagnosis and treatment. Boston, MA: Brigham and Women's Hospital; 2006.
- 4 Clinical Knowledge Summaries (CKS). Shoulder pain. Newcastle upon Tyne: CKS; 2008.
- 5 Clinical Knowledge Summaries (CKS). Osteoarthritis. Newcastle upon Tyne: CKS; 2009.
- 6 Dinnes J, Loveman E, McIntyre L et al. The effectiveness of diagnostic tests for the assessment of shoulder pain due to soft tissue disorders: a systematic review. Health Technol Assess 2003; 7: 1-185.
<http://www.ncchta.org/fullmono/mon729.pdf>
- 7 Gotzsche P. Non-steroidal anti-inflammatory drugs. Clin Evid 2002; 1203-1211.
- 8 National Institute for Health and Clinical Excellence (NICE). Extracorporeal shockwave lithotripsy for calcific tendonitis (tendinopathy) of the shoulder. Interventional Procedure Guidance 21. London: NICE; 2003.
<http://www.nice.org.uk/nicemedia/pdf/ip/IPG021guidance.pdf>
- 9 New Zealand Guidelines Group. The diagnosis and management of soft tissue shoulder injuries and related disorders. Wellington: New Zealand Guidelines Group; 2004.
http://www.nzgg.org.nz/guidelines/0083/040715_FINAL_Full_Shoulder_GL.pdf_1.pdf
- 10 Speed C. Shoulder pain. Clin Evid 2008; 1107-31.