

**DIAGNOSTIC IMAGING REPORT**

**Southern Health** : Monash Medical Centre  
Phone : 03-9594-2200

**Patient** : RACO, NATHAM  
**DOB** : 06/04/1993

**Patient ID** : 7368056

**Referring Doctor** : DR DAVID MCCOMBE  
**Address** : ST VINCENTS, SUITE 1, HEALY WI  
: 41 VICTORIA PARADE, FITZROY,

**Procedure** : CT Wrist

**Date** : 13/Mar/2013 04:00 PM

Clinical: arthrogryposis, for further assessment of the degree of motion at the radial-lunate and the lunate-capitate articulation

Bone fusion which is congenital is noted between the lunate and the triquetrum.  
The capitate demonstrates pseudo subluxation with partial articulation of the lunate and scaphoid and the articulation of the capitate is predominantly centred between the scaphoid and lunate.

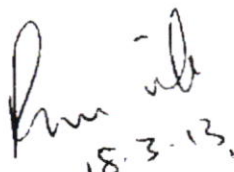
Assessment of the sagittal reconstructed images through the wrist and extreme of flexion and extreme of extension has been undertaken.  
The difference between extreme flexion and extreme of extension measures approximately 20°. There is persistent limitation of significant extension.

With regard to the motion assessment, there is mild improvement of the congenitally fused lunate-triquetrum from mild flexion to neutral projection, no significant extension of the lunate is identified with hand extension.  
The capitate articulation with the lunate-scaphoid junction also demonstrates approximately 20° extension paralleling the hand extension. Further extension is not possible with active motion.  
The degree of lunate extension (from flexion through to extension) demonstrates approximately 3° of improvement.

**Conclusion:**

Hand flexion through to extension is limited to 20° of motion (maximum hand extension series 19 B demonstrates significant persistent hand flexion).  
During this motion, the capitate angle is aligned with the hand and therefore demonstrates 20° of motion.  
The dysplastic, congenitally fused lunate (fused to the triquetrum) demonstrates an improvement of extension of approximately 3°, these findings are best documented on series 27 B (maximum flexion) compared with series 19 B (maximum hand extension).

**Dictated by** : DR JOHN TROUPIS On 18/03/2013 18:32 Hrs  
**Transcribed by** : JOHN TROUPIS On 18/03/2013 18:32 Hrs  
**Co-signed By** :  
**Approved by** : DR JOHN TROUPIS On 18/03/2013 19:03 Hrs

  
18.3.13.

ST VINCENT'S PRIVATE RADIOLOGY - Reference No: 2013C0045049-1 Status: F

Patient: Natham RACO Linked by: Mr David McCombe  
DOB: 06/04/1993 Message: No Action  
Address: 72 Vida Street Aberfeldie 3040  
Ordered by: Dr David McCombe on 12/12/2013  
Copy to: Dr David McCombe Dr David McCombe  
Collected: 12/12/2013 - 12:30 PM Notified by: on 00/00/0000  
Reported: 13/12/2013 Message:

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#### RIGHT WRIST ULTRASOUND

##### Indication

Arthrogryposis - painful right wrist over Guyon's space and ulnar n symp.  
Flexor tenosynovitis? Ganglion?

##### Findings

Given this the canal is sonographically normal. There is no extrinsic mass and there is no focal expansion of the nerves. The ulnar, median and radial nerves appear sonographically normal at the level of the wrist as are the flexor tendons with no evidence of tenosynovitis. There is no appreciable ganglion.

No fusion of the wrist. All six extensor compartments appear sonographically normal.

##### Opinion

No tenosynovitis or neural issue demonstrated.

Episode Number: 2013C0045049

Reporting Doctor: Dr Sutherland

ST VINCENT'S PRIVATE RADIOLOGY - Reference No: 2013C0045050-1 Status: F

Patient: Natham RACO                      Linked by: Mr David McCombe  
DOB: 06/04/1993                      Message: No Action  
Address: 72 Vida Street Aberfeldie 3040  
Ordered by: Dr David McCombe on 12/12/2013  
Copy to: Dr David McCombe Dr David McCombe  
Collected: 12/12/2013 - 1:11 PM                      Notified by: on 00/00/0000  
Reported: 13/12/2013                      Message:

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**RIGHT WRIST X-RAY**

**Clinical Notes**

Arthrogryposis - painful right wrist tendon over Guyon's space and ulnar nerve.

**Findings**

The lunate and triquetrum are fused.

There is an unusual configuration of the distal ulnar and there is 3mm of positive ulnar variance. NO definite bone erosion is demonstrated

No acute fracture is identified.

Episode Number: 2013C0045050

Reporting Doctor: Dr Dart





ST VINCENT'S  
PRIVATE HOSPITAL

MELBOURNE

A FACILITY OF ST VINCENT'S HEALTH AUSTRALIA

## DICTATED OPERATION REPORT

**PATIENT NAME:** MR NATHAM PAUL RACO  
**UR No:** 533447  
**SURGEON:** MR DAVID MCCOMBE  
**ANAESTHETIST:** DR ANTHONY B. POON  
**PREOPERATIVE DIAGNOSIS:** LEFT WRIST CONTRACTURE SECONDARY TO  
ARTHROGRYPOSIS  
**OPERATION:** DORSAL WEDGE CARPECTOMY AND MIDCARPAL  
FUSION LEFT WRIST, LEFT ECU TO ECRL TENDON  
TRANSFER, LEFT POSTERIOR INTEROSSEOUS  
NEURECTOMY  
**DATE OF OPERATION:** 18/03/2015

*Dr. D. McCombe*  
21.3.15

### **PREOPERATIVE NOTE:**

Natham is a 21-year-old man who presents with painful contracture of his left wrist. He had been evaluated with imaging prior to surgery. He had been planned for either dorsal wedge carpal osteotomy or proximal row carpectomy. He was consented for surgery.

### **PROCEDURE:**

Under general anaesthetic and using an arm tourniquet, the left hand was scrubbed, prepped and draped.

A dorsal longitudinal incision was made and carried through the subcutaneous plane with care taken to identify and preserve cutaneous nerves.

The extensor retinaculum was opened through the third compartment and the EPL tendon translocated to the subcutaneous plane.

The second and fourth compartments were elevated off the dorsum of the wrist and distal radius.

A ligament sparing capsulotomy was performed.

The joint was evaluated. It was seen that the movement was actually occurring at the radiolunate joint and that this appeared in reasonable condition. There was a dorsal prominence to the lunate which was causing impingement on the dorsal rim of the radius. This was resected.

To address the contracture, it was elected to proceed with a dorsal wedge osteotomy which was performed through the midcarpal joint. The joint was reduced and then arthrodesis secured with two headless compression screws to the scaphocapitate and lunohamate joints.

DICTATED OPERATION REPORT

MR-45A



ST VINCENT'S  
PRIVATE HOSPITAL

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## DICTATED OPERATION REPORT

**PATIENT NAME:** MR NATHAM PAUL RACO  
**UR No:** 533447  
**SURGEON:** MR DAVID MCCOMBE  
**DATE OF OPERATION:** 18/03/2015

PAGE 2

A solid fixation was achieved.

A posterior interosseous neurectomy was performed. Capsule was repaired. The ECU tendon was subluxed into a volar position and this was transferred with distal release and passed dorsal to the finger and digit extensors and deep to the ECRB and it was transferred to the ECRL with a tendon weave.

Skin was then closed with Vicryl and nylon suture and dressing and volar splint applied.

**POSTOPERATIVE ORDERS:**

The patient to be discharged Day 1 postoperatively.  
Review in the office in one week.

DM/SS/IMN  
18/03/15

DICTATED, BUT NOT SEEN BY: **MR DAVID MCCOMBE**

cc: Professor C Coombs, 883 Hampton Street, BRIGHTON VIC 3186

DICTATED OPERATION REPORT

MR-45A

ST VINCENT'S PRIVATE RADIOLOGY - Reference No: 2015C0014913-1 Status: F

Patient: Natham RACO Linked by: Mr David McCombe  
DOB: 06/04/1993 Message: No Action  
Address: 72 Vida Street Aberfeldie 3040  
Ordered by: Dr David McCombe on 24/04/2015  
Copy to: Dr David McCombe Dr David McCombe  
Collected: 24/04/2015 - 3:31 PM Notified by: on 00/00/0000  
Reported: 24/04/2015 Message:

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**LEFT WRIST XRAY:**

The wrist is held in dorsiflexion. There appears to be loss of height of the scaphoid, lunate and triquetrum. Narrowing of the radiocarpal joint particularly laterally. Screws from the scaphoid to the capitate and from the lunate to the hamate. There is possible ankylosis between capitate, lunate, hamate and lunate.

Episode Number: 2015C0014913

Reporting Doctor: Dr Trost



**ST VINCENT'S PRIVATE RADIOLOGY** - Reference No: 2015C0026327-1    Status: F

<b>Patient:</b>	Natham RACO	<b>Linked by:</b>	Mr David McCombe
<b>DOB:</b>	06/04/1993	<b>Message:</b>	No Action
<b>Address:</b>	72 Vida Street Aberfeldie 3040		
<b>Ordered by:</b>	Dr David McCombe on 17/07/2015		
<b>Copy to:</b>	Dr David McCombe Dr David McCombe		
<b>Collected:</b>	17/07/2015 - 2:36 PM	<b>Notified by:</b>	on 00/00/0000
<b>Reported:</b>	17/07/2015	<b>Message:</b>	

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**LEFT WRIST XRAY:**

Two screws through carpal bones, that appear to be from lunate to capitate and from triquetrum to hamate. There appears to be ankylosis across these pairs of bones. There appears to be a collapse of the proximal aspect of the scaphoid. Possible ankylosis between the scaphoid and lunate.

Episode Number: 2015C0026327

Reporting Doctor: Dr Trost

**ST VINCENT'S PRIVATE RADIOLOGY** - Reference No: 2015C0034055-1 Status: F

**Patient:** Natham RACO **Linked by:** Mr David McCombe  
**DOB:** 06/04/1993 **Message:** No Action  
**Address:** 72 Vida Street Aberfeldie 3040  
**Ordered by:** Dr David McCombe on 14/09/2015  
**Copy to:** Dr David McCombe Dr David McCombe Dr David McCombe Dr David McCombe  
**Collected:** 14/09/2015 - 10:43 AM **Notified by:** on 00/00/0000  
**Reported:** 15/09/2015 **Message:**

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**X-RAY LEFT WRIST****Clinical:**

Post limited wrist fusion.

**Report:**

Reference made to 17/07/2015.

Two screws are demonstrated through the central and ulnar aspect of the carpus with mild dorsal soft tissue swelling. There is mild degree of flexion at the wrist joint. Overall alignment is unchanged in the interval. Minimal appreciable change in bony remodelling since the prior study. No perihardware lucency to suggest fracture or loosening. No soft tissue calcification.

Episode Number: 2015C0034055

Reporting Doctor: Dr Marcus Pianta



**ST VINCENT'S PRIVATE RADIOLOGY** - Reference No: 2015C0039132-1 Status: F

**Patient:** Natham RACO **Linked by:** Mr David McCombe  
**DOB:** 06/04/1993 **Message:** No Action  
**Address:** 72 Vida Street Aberfeldie 3040  
**Ordered by:** Dr David McCombe on 21/10/2015  
**Copy to:** Dr David McCombe Dr David McCombe Dr David McCombe Dr David McCombe  
**Collected:** 21/10/2015 - 12:27 PM **Notified by:** on 00/00/0000  
**Reported:** 21/10/2015 **Message:**

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**X-RAY RIGHT WRIST****Clinical notes:**

Arthrogryposis right wrist. Right radial wrist pain.

**Report:**

Comparison is made with a previous x-ray dated 12/12/2013.

The lunate and triquetrum are fused. Once again, there is a unusual configuration to the distal ulna with positive ulnar variance which is not significantly altered when compared to the prior x-ray. No definite bony erosions. No acute fracture.

The radiographic appearance is not significantly altered when compared to the previous study.

Episode Number: 2015C0039132

Reporting Doctor: Dr Warren Perera (SVPR)

ST VINCENT'S PRIVATE RADIOLOGY - Reference No: 2015M0015873-1 Status: F

Patient: Natham RACO Linked by: Mr David McCombe  
DOB: 06/04/1993 Message: No Action  
Address: 72 Vida Street Aberfeldie 3040  
Ordered by: Dr David McCombe on 21/10/2015  
Copy to: Dr David McCombe Dr David McCombe Dr David McCombe Dr David  
McCombe Mr Christopher Coombs Mr Christopher Coombs Dr Jean Low Dr  
Jean Low  
Collected: 04/11/2015 - 10:30 AM Notified by: on 00/00/0000  
Reported: 04/11/2015 Message:

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**MRI RIGHT WRIST:**

**Clinical notes:**

Painful right wrist - arthrogryposis.

**Technique:**

Unenhanced multisequence MRI performed through the right wrist.

**Report:**

Both volar and dorsal subcutaneous heterogeneity and focal susceptibility artefact suggesting prior intervention. Slight ulnar deviation at the carpometacarpal articulations similarly demonstrated by a plain radiograph on October 21, 2015. Negative ulnar variance approximately 2-3mm with slight altered morphology distal ulna and radius, as well as coalition lunar triquetrum without bone marrow oedema signal, and widened interval lunate-scapoid. Bone marrow oedema demonstrated of the scaphoid, which is of altered morphology, as well as the distal radius with chondral fissuring, in keeping with degeneration. Small radiocarpal joint effusion and synovitis.

Normal flexor tendons, median and ulnar nerves. Extensor tendons demonstrate normal signal, although extensor digitorum underlies the dorsal subcutaneous irregularity suggesting prior intervention, however, considering this, these appear normal. No discernible triangular fibrocartilage, and there is a trace amount of distal radial ulnar joint fluid. Normal muscle signal and bulk.

**Comment:**

Altered wrist morphology, particularly radioulnar, radiocarpal articulations, including lunate-triquetral coalition and widened scapholunate interval. There is mild degeneration at the radioscapoid articulation with chondral loss and bone marrow oedema signal.

There is no discernible triangular fibrocartilage, with slight negative ulnar variance, and considering the prior intervention, the flexor and extensor tendons appear intact.

Episode Number: 2015M0015873

Reporting Doctor: Dr Marcus Pianta

ST VINCENT'S PRIVATE RADIOLOGY - Reference No: 2016C0010519-1 Status: F

**Patient:** Natham RACO **Linked by:** Mr David McCombe  
**DOB:** 06/04/1993 **Message:** No Action  
**Address:** 72 Vida Street Aberfeldie 3040  
**Ordered by:** Dr David McCombe on 29/03/2016  
**Copy to:** Dr David McCombe Dr David McCombe Dr David McCombe Dr David McCombe  
**Collected:** 01/04/2016 - 9:06 AM **Notified by:** on 00/00/0000  
**Reported:** 01/04/2016 **Message:**

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**CT LEFT WRIST:**

**Clinical notes:**

Past history arthrogryposis. Has had dorsal wedge carpectomy. Pain at base of thumb/radial styloid ? impingement between scaphoid and radius.

**Technique:**

Volumetric non contrast CT of the left wrist.

**Report:**

Comparison is made to a previous left wrist x-ray dated May 29, 2016.

As seen on the previous x-ray, there is deformity of the carpus with two metallic screws in place, one passing through the scaphoid and capitate and the second passing through the lunate, hamate and into the base of the 4th metacarpal. No peri-metallic lucency is identified to indicate loosening.

The scaphotrapezium articulation is abnormal, with likely degenerative change where there is subchondral sclerosis, joint space irregularity and almost erosive-type changes at the articular surface of the remnant scaphoid (Series 10B, Image 35). The trapezoid articulation is better in comparison. The 1st carpometacarpal joint appears preserved.

Within the limitations of CT, no obvious soft tissue abnormality.

Neutral ulnar variance.

There does appear to be at least partial fusion between the lunate and capitate and lunate and hamate. The visualised metacarpals appear intact.

**Impression:**

Likely degenerative change seen at the scaphotrapezium articulation, where there is increased sclerosis, joint space irregularity and almost erosive-type changes at the articular surface of the scaphoid.

No metalware complication.

Stable deformity of the carpus.

Episode Number: 2016C0010519

Reporting Doctor: Dr Warren Perera (SVPR)



**MIA VICTORIA** - Reference No: EMR      Status:

<b>Patient:</b>	NATHAM RACO	<b>Linked by:</b>	Mr David McCombe
<b>DOB:</b>	06/04/1993	<b>Message:</b>	No Action
<b>Address:</b>	72 Vida Street Aberfeldie 3040		
<b>Ordered by:</b>	Mr David McCombe on 08/11/2019		
<b>Collected:</b>	08/11/2019	<b>Notified by:</b>	on 00/00/0000
<b>Reported:</b>	11/11/2019	<b>Message:</b>	

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Patient ID: 12.95047891

Mr David McCombe

Order: 77.13868905\_1

Mr David McCombe  
Suite C37, Level 3, Building C,  
41 Victoria Parade  
Fitzroy 3065  
Tel: 0394128820  
8th November 2019

Patient ID: 12.95047891  
Accession Number: 77.13868905  
UR Number: R22862

Reported: 11 November 2019

Dear Mr McCombe

Re: Mr NATHAM Raco - DOB: 06/04/1993  
72 Vida Street ABERFELDIE 3040

MRI RIGHT WRIST

Clinical Notes: Arthrogryposis. Painful right wrist. ? radioscapoid impingement and impingement ulnar styloid.

Findings: The study was technically difficult due to flexion deformity of the elbow. Patient was able to be partially scanned with hand and wrist on the table and patient lying prone over the top. Only limited views were able to be obtained.

Congenitally fused lunate and triquetrum noted. The distal radius is somewhat dysplastic with a slightly prominent ulnar border. The TFC is not clearly identified consistent with chronic tear. The scapholunate distance appears increase. The lunate is displaced volarly with dorsal tilt relative to the scaphoid.

Fatty atrophy of many of the forearm muscles noted.

Conclusion: Findings consistent with chronic tear of the TFC. Remodelling of the distal radius. Congenital fusion of lunate and triquetrum. No bone oedema evident. Technically difficult study.

Dr Peter SMITH

Electronically signed at 11:12 am Mon, 11th Nov 2019

cc: Mr Coombs

cc: COOMBS, Mr Christopher, 883 Hampton Street BRIGHTON VIC 3186



**PATIENT NAME:** NATHAM RACO  
**UR No:** 533447  
**SURGEON:** MR DAVID MCCOMBE  
**ASSISTANT:** DR STEPHEN BUTLER  
**ANAESTHETIST:** DR CAROLYN J TIPPETT  
**PREOPERATIVE DIAGNOSIS:** ULNOCARPAL IMPINGEMENT ASSOCIATED WITH ARTHROGRYPOSIS DEFORMITY  
**OPERATION:** RIGHT ECU TO ECRL TENDON TRANSFER, TENOLYSIS OF PREVIOUS GREEN TRANSFER, TENOLYSIS EPL, POSTERIOR INTEROSSEOUS NEURECTOMY  
**DATE OF OPERATION:** 30/09/2020  
**HOSPITAL:** St Vincent's Private Hospital Melbourne

**PREOPERATIVE NOTE:**

Natham is a 27-year-old man with arthrogryposis multiplex congenita with a past history of multiple procedures for both upper limbs including a Green (FCU to ECRB tendon transfer for wrist extension). He had ongoing problems with ulnar deviation deformity producing ulnocarpal impingement and instability of his distal extensor tendons. He was consented for correction of this.

**PROCEDURE:**

Under general anaesthetic following administration of antibiotics, the right hand was scrubbed, prepped and draped.

The previous dorsal midline incision was reopened and extended proximally and distally. The FCU to ECRB tendon transfer was identified. Tenolysis was performed so as to allow correction of the wrist deformity. The EPL tendon transfer was passed radially to the EPL tendon and it was adherent to this and a further tenolysis of the EPL tendon was performed. The excursion of the proximal FCU muscle was poor and it was elected to divide the tendon transfer so as to optimise the wrist range of motion.

The ECRL tendon was identified. This had previously been attached to the distal radius as a capsulodesis procedure. This was freed and the distal portion of this was mobilised as the recipient for the tendon transfer. The ECU tendon was identified distal to the retinaculum and divided. There were slips of the tendon inserting into the carpus as well as fifth metacarpal. The tendon was retracted proximal to the retinaculum passed in the subcutaneous plane and weaved into the ECRL correcting the deformity.

The retinaculum was repaired deep to the tendon transfers and EPL which were both left in the subcutaneous plane. The ECRB stump was then weaved into the tendon transfer for balance. Haemostasis was obtained. The wound was closed with Monocryl suture. Bulky dressing and a splint applied.

**POSTOPERATIVE ORDERS:**

The patient to be discharged Day 1 postoperatively  
Review in the office in one week

DM  
30/9/2020

DICTATED, BUT NOT SEEN BY: MR DAVID MCCOMBE