
First Actionable Communication Transparency (FACTs):

Details for Residents

Updated 2/12/20

GOALS

1. Provide measurable **improvement in the clinical care of STAT inpatients and outpatients** by decreasing time to first actionable communication by a radiologist for after-hours CT and MRI studies.
2. Enhance the clinical role of radiology residents through issuing actionable communication on high acuity inpatient and after-hours outpatient exams.
3. Improve transparency to referring providers regarding the communication of results, the radiologist delivering the interpretation, and who to page with questions.
4. Standardize radiology practices across the Brigham Health enterprise.
5. Reduce unnecessary STAT orders

WORKFLOW DETAILS

1. Consult shift workflow:

5:30 pm - 12:30 am Monday-Friday

5:00 pm - 9:00 pm Saturday/Sunday/holidays

1. Visage list: CONSULTS
2. The Consult resident is responsible for communicating any stat inpatient ultrasounds and stat/urgent outpatient ultrasounds pertaining to abdomen or MSK.
 - a. Exceptions (see separate US workflow document for details): Obstetric, pelvic, vascular doppler studies
3. Studies from BWFH will be included in the same workflow as BWH studies
4. The Consult resident is responsible for issuing an actionable report (via ANCR; see “Documentation of Communication” section for details) for all STAT inpatient CTs, MRIs and all STAT/”patient waiting” outpatient CTs and MRIs performed after 5:30pm (end time of 12:30am for weekdays and 9pm for weekends/holidays).
 - a. Exception: Inpatient head CTA and neuro MRIs are interpreted by the Neuroradiology fellow-on-call until 11pm on Mon-Sat and 10pm on Sunday.

- b. The Consult resident will not provide interpretations for or preview routine outpatient studies unless paged by an ordering provider.
5. The resident is *strongly encouraged* to look at and issue a first communication on as many of the non-STAT inpatient CT and MRI exams (prioritizing “within 6 hour” and then routine studies) as possible during the shift, as time allows.
6. The resident will issue a first communication on any non-STAT CT, MRI, ultrasound or radiograph if specifically requested by the referring provider for the purposes of immediate, overnight clinical care or if notified by the technologist about an OR radiograph to rule out retained foreign body.
 - a. If residents are called for consultation on routine studies for the purpose of facilitating AM rounds (and not for immediate overnight clinical care), these can be deferred to the relevant subspecialty division (daytime) the following morning.
 - b. If a resident feels that an urgent read is requested for a routine study, where the clinical urgency is questionable, the resident should submit a Worth Another Look “Consult Resident Feedback” ANCR to Dr. Khorasani with the name of the person who requested the read urgently. It is important to include the person’s name, as this person may be from a different service than that which ordered the study. This feedback will be reviewed regularly by the Radiology Vice Chair for Quality & Safety (or delegate) and by the Associate Chief Medical Officer (or delegate)
7. If the resident does not feel comfortable issuing an actionable report on an exam (e.g., CTA or MRI) or is unable to do so within a reasonable time frame due to time constraints, he/she should request that the case be reviewed by the fellow-on-call for the respective division via purple ANCR page using the “Consult” category. Make sure the page option is checked as the fellows are not expected to check their emails after hours.
 - a. Once a “Consult” purple ANCR has been requested, it is the responsibility of the fellow-on-call to communicate the findings to the primary team via ANCR and to close the purple ANCR.
 - b. If the fellow-on-call does not feel comfortable issuing an actionable report, the current escalation policy applies; he/she should contact his/her respective division’s attending, per division policy.
 - c. If the resident has not heard back from the fellow-on-call after assistance has been requested via a purple ANCR, the resident can try contacting the fellow again, or can escalate the study to the section’s attending-on-call.
8. The Consult resident is the primary contact person for all inpatient CT, MRI, radiographs, abdominal US and MSK US outside of normal business hours via pager 11883.
9. This Consult resident is not responsible for OB/pelvic/vascular US, Nuclear Medicine, or Interventional Radiology services overnight.
10. If a resident feels that a study that was ordered STAT is of questionable clinical urgency, this should be entered as a Worth Another Look “Consult Resident Feedback” ANCR to Dr. Khorasani.
11. If a referring attending requests a radiology attending opinion after hours, the resident should escalate through existing divisional procedures (page fellow who will then reach out to attending) until 11pm. After 11pm, resident should ask ED attending for review. ED attending can decide at her/his discretion to defer to divisional attendings based on case complexity and/or workload.

2. Night float workflow:

12:30 am - 8:00 am Monday-Friday

9:00 pm - 8:00 am Saturday/Sunday/holidays

1. Visage list: NIGHT FLOAT.
2. The Night Float resident is responsible for issuing an actionable report on all STAT inpatient CTs, MRIs, abdominal US, and MSK US performed during the hours listed above; similar policies as outlined above for Consult shift applies.
3. The Night Float resident will also issue an actionable report for any inpatient CT, MRI, radiograph, or ultrasound requested by a referring provider for the purposes of immediate, overnight clinical care (see #4 in the "Consult shift" workflow section above).
4. The Night Float resident will follow the same procedure for issuing an actionable report described elsewhere in this document (i.e., utilize ANCR, send purple ANCR to fellow for additional assistance).

3. Documentation of Communication (actionable reports)

1. The communication by the Consult resident should be restricted to short, succinct actionable assessments as relevant to the overnight and immediate clinical care of the patient only (rather than incidental findings that can be triaged at the time of the final image interpretation).
2. This communication is performed via ANCR, using red, orange, yellow, or the green (which includes normal, unchanged, or no acute findings) ANCR options. The "not yet reviewed by attending radiologist" option should be checked off as appropriate. For "Attending (Sender)," the "Attending (Sender) Not Yet Assigned" button can be checked off as appropriate. This ensures transparency in communication as ANCR can be searched (based on patient name, MRN, or date of birth) by any Brigham Health provider.
3. The resident will also generate a "sticky note" on Visage saying, "ANCR" with a short summary if possible, to ensure that the radiologists reviewing the study are aware that communication already took place on this case.

ANCR Tip Sheet for Residents

- **Not yet reviewed by attending radiologist:** If you are sending an ANCR alert on a study that has not yet been reviewed by an attending radiologist, there is now a radio button for you to select which produces text in the alert description. You can then copy/type your alert description on the next line.

CRITICAL ALERT LEVEL

- Red Alert (Level 1)** Findings that are **potentially immediately life-threatening**. Requires "face-to-face" or "telephone" contact.
⊕ Test Text
⊕ new value
- Orange Alert (Level 2)** Findings that *could result in mortality or significant morbidity if not appropriately treated* **urgently**. Requires "face-to-face" or "telephone" contact.
- Yellow Email Alert (Level 3)** Findings that *could result in mortality or significant morbidity if not appropriately treated*, but are not immediately life-threatening or urgent. Requires "face-to-face", "telephone", or other verifiable contact. **Email is the default communication option and pager is optional.**
- Yellow Pager Alert (Level 3)** Findings that *could result in mortality or significant morbidity if not appropriately treated*, but are not immediately life-threatening or urgent. Requires "face-to-face", or "telephone", or other verifiable contact. **Pager is the default communication option and email is optional.** (Example: for use in Emergency Dept.)

Critical Findings Description

Not yet reviewed by attending radiologist

This study has not yet been reviewed by an attending radiologist at this time.

- **Purple ANCR, Consult:** Use this function to page a fellow-on-call for additional assistance on a specific study. The fellow will then close this ANCR to acknowledge that they received your request, and will create their own ANCR at the appropriate alert level to communicate the findings to the team once the study has been reviewed.

OTHER ALERT LEVEL

- Worth Another Look Alert (WAL)** This alert is for radiologist to radiologist communication for peer review and QA purposes ONLY as part of the BWH 'just culture' initiative.
- Pink Alert** This alert level is for Breast Imaging radiologists to communicate follow-up instructions to the mammography coordinators at the location where the imaging exam was performed (850, DFCI/MV/WS, FLK, FXB, LBC). **Email is the only communication option for this level.**
- Technical Feedback** This alert is for radiologist to modality leadership communication for imaging QA and feedback (excluding patient callbacks).
- Patient Callback** This alert is for radiologist to modality leadership communication for patient callbacks (excludes screening mammography).

Critical Findings Description

Consult Clinical Follow-up Great Call Consult Resident Feedback Report Template Feedback

I would appreciate your opinion on this case. See image(s):

- **Purple ANCR, Consult Resident Feedback:** You can use this function to send feedback to Ramin Khorasani if you believe a study ordered as "STAT" or an urgent read request on a routine study is of questionable clinical urgency for immediate overnight clinical care.

OTHER ALERT LEVEL

Worth Another Look Alert (WAL) This alert is for radiologist to radiologist communication for peer review and QA purposes ONLY as part of the BWH 'just culture' initiative.

Pink Alert This alert level is for Breast Imaging radiologists to communicate follow-up instructions to the mammography coordinators at the location where the imaging exam was performed (850, DFCI/MV/WS, FLK, FXB, LBC). **Email is the only communication option for this level.**

Technical Feedback This alert is for radiologist to modality leadership communication for imaging QA and feedback (excluding patient callbacks).

Patient Callback This alert is for radiologist to modality leadership communication for patient callbacks (excludes screening mammography).

Critical Findings Description

Consult
 Clinical Follow-up
 Great Call
 Consult Resident Feedback
 Report Template Feedback

Consult resident feedback. See image(s):

CONTACTS

Attending (Sender)

*

Not Yet Assigned

Receiver **Khorasani, Ramin, M.D., M.P.H. (** *

Inpatients:

Outpatients:

Cc

Inpatients:

Outpatients:

- Green ANCR:** Under “Other Alert Level” there is a Green Alert, used for closed-loop communication of non-critical results for exams with the priority of **Stat / Needed for Discharge / Patient Waiting**. There are also radio buttons that will populate corresponding text in the “Critical Findings Description.” You will then have to choose your means of communication (either email, pager, or both).

Stat / Needed for Discharge / Patient Waiting This alert is for closed-loop communication of non-critical results for exams with priority of **Stat / Needed for Discharge / Patient Waiting**.

Patient Callback This alert is for **radiologist to modality leadership** communication for **patient callbacks** (excludes screening mammography).

Critical Findings Description *

Normal Unchanged from most recent prior No acute findings

Unchanged from most recent prior.

CONTACTS

Receiver **Referring, Rita (Fake User)** * Inpatients:
 Outpatients:

Cc Inpatients:
 Outpatients:

COMMUNICATION OPTIONS *

Use ANCR to notify the provider of the Critical Result.

Email

Pager* Callback Information:

- **Viewing previous ANCRs:** This function can be used to review any prior ANCR, including those placed by someone else. This is especially important if reviewing a study that had an actionable communication placed by an overnight resident. Prior ANCR notifications can be searched by accession number (as in the example below) or by patient MRN.

PATIENT & EXAM INFORMATION

Patient Name * Exam ID *

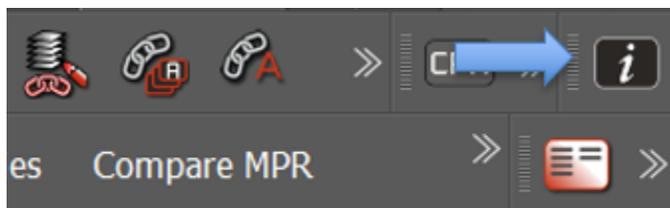
Patient DOB (mm/dd/yyyy) Exam Date (mm/dd/yyyy)

Patient MRN * Exam Time

Exam Description

Visage Tip Sheet for Residents

- **How to create a “sticky note” in Visage:** This should be done to alert the radiologists who will be looking at this exam later that a first actionable communication was performed via ANCR.
 - Step 1: Select the appropriate exam and open the info tab



- Step 2: Type in “ANCR – [quick summary]” and save

A screenshot of the 'Study Info' window in Visage software. The window has a title bar with 'Study Info' and a close button. It is divided into two main sections: 'Patient' and 'Study'.
Patient Section:
Name: [Redacted]
ID: [Redacted]
Date of Birth: [Redacted]
Study Section:
Description: CT PELVIS SOFT TISSUE w CONTRAST
Date, Time: [Redacted]
Comment: **ANCR - ruptured appendicitis**
Accession Number: [Redacted]
Contrast: [Redacted]
Machine: SOMATOM Definition AS+
Admitting Diagnosis: [Redacted]

How to change exam order and priority status:

Feb 2020

1. Go to protocol work list or type in accession number to open protocol
2. Click "Change Order" button on the top bar
3. Type in and search for appropriate order, click Accept
4. Select different order priority
5. In the bottom right hand corner, make a brief note of who you spoke to and when
6. Remember to always check with ordering provider before changing an exam – this is professional courtesy, a learning opportunity, and shared decision making amongst clinicians. When you change an exam, it directly impacts the patient, clinical expectations, and possibly insurance coverage issues, so be sure to vet the change with the ordering team.

The screenshot shows the Epic Protocol Work List interface. The title bar reads "Production - BWH IR RADIOLOGIST - JUNZI M.D. SHI". The main header is "Protocol Work List: BWH Abdominal CT/MRI (1 DAY), Total Count: 8". A toolbar contains several icons, with the "Change Order" icon (a document with a double-headed arrow) circled in red. A tooltip for this icon says "Change the selected order". Below the toolbar is a table with columns: Note, Pt, Pric, Patient, BW, MRN, Procedure, Imaging Order Panel, Mo, Accession, and Ap. The table contains several rows of exam data, with the row "CT Abdomen/Pelvis" highlighted in blue.

Note	Pt	Pric	Patient	BW	MRN	Procedure	Imaging Order Panel	Mo	Accession	Ap
						CT Abdomen Only (No Pelvis)		CT		
						MRI Pelvis (GI/GU)		MR		
						CT Abdomen/Pelvis	CT Chest/Abdomen/Pelvis	CT		
						MRI Prostate		MR		
						CT Abdomen/Pelvis		CT		

Team: No Attendin...
PCP: Unknown, Un...
Service: None

Allergy: Ginger (Zin...)
Code: Not on file

FYI: None
Pt Reminder: None +

No MOLST
Patient Gatew...

Class: None

Change Order: CT Abdomen/Pelvis

Prov: MELNITCHOUK, NELYA [1008644]

Proc: CT Abdomen/Pelvis

Priority: Routine

Diagnosis

Peritoneal mesothelioma

CC Recipients

Nelya Melnitchouk, MD, MSc

Change reason:

Change comments:

Category Select

Search:

Title	Number
Lab Protocol Routine	13
Lab Protocol STAT	14
Lab Protocol Timed	15
Routine	6
STAT	2
Today	5
Urgent/patient waiting	22

7 categories loaded.

Accept Cancel

Allergy: Ginger (Zin...)
Code: Not on file

FYI: None
Pt Reminder: None +

No MOLST
Patient Gatew...

Class: None

Change Order: CT Abdomen/Pelvis

Prov: MELNITCHOUK, NELYA [1008644] Dept: BWP GENERAL GI SURG

Proc: CT Abdomen/Pelvis

Priority: Routine Class: Internal, Schedule in Epic

Diagnosis

Peritoneal mesothelioma

Modifiers

CC Recipients

In Basket

Change reason:

Change comments:

Prompt: Please provide any additional clinical context for this exam (additional indications, different diagnoses, other relevant history):
Answer: Mesothelioma

Prompt: Is a particular imaging focus suggested (radiology may call to confirm)?
Answer: Per Radiologist discretion/standard based

Prompt: Does this procedure require Anesthesia?
Answer:

Prompt: Intravenous Contrast Request:
Answer: Per Radiologist discretion/standard protocol

Prompt: Oral Contrast Request:
Answer: Per Radiologist discretion/standard protocol

Reason for Exam

*Colorectal cancer, surveillance

Additional indications:

Order Comments:

Document here who you spoke to at what time | .i

Accept Cancel

BEST PRACTICE ADVISORIES (BPAs) FOR INPATIENT STAT IMAGING BY MODALITY

Stat Imaging Order - CT

STAT Definition: *IMMEDIATE TEST RESULTS ARE REQUIRED FOR CRITICAL TREATMENT DECISIONS*

“STAT” CT will be performed within 2-hrs and results communicated within 1-hr after performed.

- If you need a CT performed in less than 2-hrs, please call 617-XXX-XXXX
- If a CT result is needed in less than 1-hr after it has been performed, please call 617-278-5502
- If results not needed within 3-hrs; please change your order priority <@Raj – do you think we need to include instructions

ORDERING PROVIDER WILL BE PAGED AND MUST CALL BACK FOR RESULTS

Stat Imaging Order - MRI

STAT Definition: *IMMEDIATE TEST RESULTS ARE REQUIRED FOR CRITICAL TREATMENT DECISIONS.*

“STAT” MRI will be performed within 6-hrs and results communicated within 1-hr after performed.

- If you need an MRI performed in less than 6-hrs, please call 617-XXX-XXXX
- If an MRI result is needed in less than 1-hr after it has been performed, please call 617-278-5502
- Results not needed within 7-hrs; please change your order priority <@Raj – do you think we need to include instructions

ORDERING PROVIDER WILL BE PAGED AND MUST CALL BACK FOR RESULT.

Clinical Indications for STAT MRI:

- Spinal cord compression (herniated disc, burst fracture, tumors, etc.)
- Spinal infection (i.e. abscess)
- Spinal trauma (epidural hemorrhage, etc.)
- Demyelination with acute neurologic changes
- Appendicitis in the pregnant or pediatric patient
- Hip fracture not detected on plain film or CT

Stat Imaging Order – X-Ray

STAT Definition: *IMMEDIATE TEST RESULTS ARE REQUIRED FOR CRITICAL TREATMENT DECISIONS.*

'STAT" X-ray to be performed within 2-hrs

- If you need an X-Ray performed in less than 2-hrs, please call 617-XXX-XXXX
- If you need an interpretation and report is not available in Epic, please call 617-278-5002
- X-Ray not needed within 2-hrs, please change your order priority

Stat Imaging Order – Portable X-Ray

STAT Definition: *IMMEDIATE TEST RESULTS ARE REQUIRED FOR CRITICAL TREATMENT DECISIONS.*

'STAT" Portable X-ray to be performed within 1-hr

- If you need a Portable X-ray in less than 1-hr, please call 617-XXX-XXXX
- If you need an interpretation and report is not available in Epic, please call 617-278-5502
- Portable X-Ray not needed within 1-hr, please change your order priority

Stat Imaging Order – Ultrasound

STAT Definition: *IMMEDIATE TEST RESULTS ARE REQUIRED FOR CRITICAL TREATMENT DECISIONS.*

"STAT Ultrasound to be performed within 2-hrs and results communicated within 1-hr after performed

- If you need an Ultrasound performed in less 2-hrs, please call 617-XXX-XXXX
- If an Ultrasound result is needed in less than 1-hr after it has been performed, call 617-278-5502
- If results not needed within 3-hrs; please change your order priority <@Raj – do you think we need to include instructions

ORDERING PROVIDER WILL BE PAGED AND MUST CALL BACK FOR RESULT.

Outpatient (Urgent/Patient waiting)

Imaging Order – Urgent/patient waiting

“Urgent/patient waiting” to be performed as scheduled, results communicated within 1-hr after exam performed.

YOU WILL BE PAGED AND MUST CALL BACK FOR RESULT.

- Results not needed within 1-h after performed, please change to an order priority to either:
 - Internal, Routine or other relevant order priority
 - External, Print Only