

# NCH - Pediatric MATCH – Proposed Workflow

*Version 1.3*

# Requirements

- Surgical Event ID
  - assigned to tissue (slides or blocks) received at the bank
  - based on information (i.e. patient, study, spec. type, collection date & SPID) received from collection source site
  - Only assigned for tissue
  - Included in message, shipping manifest
- Molecular IDs
  - Molecular ID is assigned to all aliquots with a common parent/shipment ID
  - Separate molecular IDs are DNA and cDNA (i.e. 00012D, 00012C) will be included in message, shipping manifest, labels
  - Blood is assigned a different Molecular ID (i.e. 00013D)

# Specimen Labels

Specimen #1 (DNA from Blood)

Registration #	894561	(Patient ID)
NCH Barcode	0BJ64A	
Molecular ID	00013D	
2D Barcode	00013D	(Molecular ID)
Specimen Type	Blood Fresh DNA	
Concentration	25 ng/ul	
Volume	10 ul	

Specimen #2 (DNA extracted from Tumor)

Registration #	894561	(Patient ID)
Surgical Event ID	125	
NCH Barcode	0BJ64B	
Molecular ID	00012D	
2D Barcode	00012D	(Molecular ID)
Specimen Type	Paraffin Scroll Primary DNA	
Concentration	25 ng/ul	
Volume	10 ul	

Specimen #3 (cDNA generated from Tumor)

Registration #	894561	(Patient ID)
Surgical Event ID	125	
NCH Barcode	0BJ64F	
Molecular ID	00012C	
2D Barcode	00012C	(Molecular ID)
Specimen Type	Paraffin Scroll Primary cDNA	
Concentration		
Volume	10 ul	

# Sequencing – Shipping Manifest Example

*BSN in adult*

*MSN in adult*

Sequencing Specimens

Shipping Manifest

05/09/2016

Registration No	Patient Name	Date of Birth	Surgical Event ID	Molecular ID	Specimen Type	Block #	Time Point	Volume	Concentration	Row	Column	% Tumor	% Necrosis	NCH Barcode
894561	Doe, John	12/6/2010		00013D	Blood Fresh DNA		Relapse	10 ul	25 ng/ul	A	1			0BJ64A
894561	Doe, John	12/6/2010	125	00012D	Paraffin Scrolls Primary DNA	B	Relapse	10 ul	25 ng/ul	A	2	70	10	0BJ64B
894561	Doe, John	12/6/2010	125	00012D	Paraffin Scrolls Primary cDNA	B	Relapse	10 ul		A	3	70	10	0BJ64F
Total Number of Specimens				3										
Shipping Contact				Billing Information			Tracking Number							
Teresa Tabler							7956 4568 1235							
MD Anderson Cancer Center							Courier Service							
8515 Fannin St							Federal Express							
Houston, TX US 77054							Fedex Account#							
							P.O. Number							

# Slide Labels

Slide Specimen #1

<b>Registration #</b>	894561	<i>(Patient ID)</i>
<b>Surgical Event ID</b>	125	
<b>NCH Barcode</b>	0BJ6A5	
<b>2D Barcode</b>	0BJ6A5	<i>(NCH Barcode)</i>
<b>Specimen Type</b>	Paraffin Unstained Primary	
<b>Block #</b>	B	

Slide Specimen #2

<b>Registration #</b>	894561	<i>(Patient ID)</i>
<b>Surgical Event ID</b>	125	
<b>NCH Barcode</b>	0BJ6A6	
<b>2D Barcode</b>	0BJ6A6	<i>(NCH Barcode)</i>
<b>Specimen Type</b>	Paraffin Unstained Primary	
<b>Block #</b>	B	

# Slides – Shipping Manifest Example

## Slide Specimens

Shipping Manifest

05/09/2016

Registration No	Patient Name	Date of Birth	Surgical Event ID	NCH Barcode	Specimen Type	Block #	Time Point	% Tumor	% Necrosis	
894561	Doe, John	12/6/2010	125	0BJ6A5	Paraffin Unstained Primary	B	Relapse	70	10	
894561	Doe, John	12/6/2010	125	0BJ6A6	Paraffin Unstained Primary	B	Relapse	70	10	
894561	Doe, John	12/6/2010	125	0BJ6A7	Paraffin Unstained Primary	B	Relapse	70	10	
Total Number of Specimens					3					
Shipping Contact					Billing Information				Tracking Number	
Teresa Tabler									7956 4568 1235	
MD Anderson Cancer Center									Courier Service	
8515 Fannin St									Federal Express	
Houston, TX US 77054									Fedex Account#	
									P.O. Number	

(all specimens received, processed and shipped no variation)

## **Workflow**

1. Blood and Tumor received in same shipment
2. Specimens accessioned into STARS
3. Blood sent to MGL (for DNA extraction, etc.)
4. Block sent to Core Morph (to cut slides)
5. Paperwork given to coordinator (next day)
6. Paperwork QC'd against STARS accessioning info
7. STARS poller sends specimen received messages; See [NCH-1-IM-1](#)
8. Stained and unstained slides sent to BPC
9. Stained slide sent to path reviewer
10. Block remaining, if any, banked at BPC
11. Slides held by BPC (for later shipment to MDA for IHC)
12. Unstained slides cut for extraction sent to Core Morph
13. Unstained slides scrapings sent to BPC
14. Unstained slide scrapings sent to MGL for extraction
15. MGL extracts DNA from blood and records yield, QC, etc. in STARS
16. MGL extracts DNA, RNA from tumor and records yield, QC, etc. in STARS
17. MGL creates cDNA from extracted tumor RNA and records QC in STARS
18. MGL signing director reviews and approves QC documentation ("sign off")
19. Shipment in STARS created to include: Aliquot of blood DNA, Aliquot of tumor DNA, Aliquot of tumor cDNA, Tumor slide
20. STARS poller sends specimen shipped messages; See [NCH-1-IM-2](#)

## Integration Messages

NCH-1-IM-1

*(2 specimen received messages)*

```
{
  "header": {
    "msg_guid": "5c64192f-8a25-4874-9db6-fd55c398822d",
    "msg_dttm": "2016-04-25T18:42:13+00:00"
  },
  "specimen_received": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "type": "BLOOD",
    "collection_dttm": "2016-04-25T14:17:11+00:00",
    "received_dttm": "2016-04-25T15:17:11+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id": "ABCXYZ-0AK64L",
      "stars_specimen_type": "Blood Fresh",
      "received_dttm": "2016-04-25T15:17:11+00:00",
      "qc_dttm": "2016-04-25T16:21:34+00:00"
    }
  }
}
```

```
{
  "header": {
    "msg_guid": "ab6d8d37-caf2-4dbb-a360-0032c7a7a76c",
    "msg_dttm": "2016-04-25T18:42:13+00:00"
  },
  "specimen_received": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "type": "TISSUE",
    "surgical_event_id": "125",
    "collection_dttm": "2016-04-25T14:17:11+00:00",
    "received_dttm": "2016-04-25T15:17:11+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id": "ABCXYZ-0AK64M",
      "stars_specimen_type": "Paraffin Block Primary",
      "received_dttm": "2016-04-25T15:17:11+00:00",
      "qc_dttm": "2016-04-25T16:21:34+00:00"
    }
  }
}
```



## Example Shipped Message – Tumor DNA/cDNA

```
{
  "header": {
    "msg_guid": "3037ddec-0081-4e22-8448-721ab4ad76b4",
    "msg_dttm": "2016-05-01T19:42:13+00:00"
  },
  "specimen_shipped": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "surgical_event_id": "125",
    "molecular_id": "00012",
    "type": "TISSUE_DNA_AND_CDNA",
    "carrier": "Federal Express",
    "tracking_id": "7956 4568 1235",
    "shipped_dttm": "2016-05-01T19:42:13+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id_dna": "ABCXYZ-0BJ64B",
      "stars_specimen_id_cdna": "ABCXYZ-0BJ64F"
    }
  }
}
```

# Blood DNA

```
{
  "header": {
    "msg_guid": "7912901b-7285-40cc-9269-1cae961a0ea7",
    "msg_dttm": "2016-05-01T19:42:13+00:00"
  },
  "specimen_shipped": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "type": "BLOOD_DNA",
    "molecular_id": "00013",
    "carrier": "Federal Express",
    "tracking_id": "7956 4568 1235",
    "shipped_dttm": "2016-05-01T19:42:13+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id": "ABCXYZ-0BJ64A"
    }
  }
}
```

# Slides Shipped

(2 of 6 examples)

```
{
  "header": {
    "msg_guid": "37c491ec-d91a-4e95-a0cf-291dadf60b2f",
    "msg_dttm": "2016-05-02T18:30:17+00:00"
  },
  "specimen_shipped": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "surgical_event_id": "125",
    "slide_barcode": "0BJ6A5",
    "type": "SLIDE",
    "carrier": "Federal Express",
    "tracking_id": "1234 1234 1234",
    "shipped_dttm": "2016-05-02T18:30:17+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id": "ABCXYZ-0BJ6A5"
    }
  }
}
```

```
{
  "header": {
    "msg_guid": "0cbfe261-293b-4ef2-ade6-eec2e342bb57",
    "msg_dttm": "2016-05-02T18:30:17+00:00"
  },
  "specimen_shipped": {
    "study_id": "APEC1621",
    "patient_id": "894561",
    "surgical_event_id": "125",
    "slide_barcode": "0BJ6A6",
    "type": "SLIDE",
    "carrier": "Federal Express",
    "tracking_id": "1234 1234 1234",
    "shipped_dttm": "2016-05-02T18:30:17+00:00",
    "internal_use_only": {
      "stars_patient_id": "ABCXYZ",
      "stars_specimen_id": "ABCXYZ-0BJ6A6"
    }
  }
}
```

# Still outstanding

- Adding patient barcode, 1 per shipping manifest (would entail patient+protocol)
- Direct access to required path report via COG RAVE
- Collection and access for treating physician information, direct access to COG RAVE