**Cancer Care Ontario**

**Specialized Services Oversight (SSO)**

**Interventional Radiology Data Dictionary**

***(Program previously designated as Focal Tumour Ablation)***

**Version 1.1 R8**

**30-January-2019**

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# Sign-Off

| Name | Title and Business Unit | Other Comments | Date of Approval & Signature |
| --- | --- | --- | --- |
| Sherrie Hertz | Group Manager  Specialized Services Oversight |  |  |

# Document Concurrences

| Name | Title and Business Unit | Other Comments |
| --- | --- | --- |
| Victoria Hagens | Group Manager, Performance Management  Cancer Planning and Regional Program Development |  |
| Amanda Wong | Coordinator, Program  Specialized Services Oversight |  |

# Version Control

|  |  |  |  |
| --- | --- | --- | --- |
| Date | Description | TFS# | Owner |
| Feb.22, 2017 | * Updated items 08 & 09 on Appendix 27: mandatory MCC\_Reivew and Date\_of\_MCC if MCC\_Review = yes * Updated validation 300 for IR8 and validation 611 for IR9 | 703036 |  |
| Mar.01, 2017 | Updated facility list (appendix 1) with 2 new facilities: Grand River Hospital (930) & Health Sciences North (959) | 717410 |  |
| Mar.06, 2017 | Renamed Appendix numbers | n/a |  |
| Aug.30,2017 | Updated name and Facility # for Kingston General Hospital | 741614 | Raj Sreenivasan |
| Sep.27,2017 | Added St. Michael’s Hospital under Appendix-1: Facility Numbers | 744276 | Raj Sreenivasan |
| Feb. 5, 18 | Added clarification to referral date definition | N/A | Amanda Wong |
| Nov.13,18 | Added “Procedure Site and Disease” data element as a unique record business key | 792273 | Raj Sreenivasan |
| Jan.30, 19 | Updated Facility list (Appendix-1: Facility Numbers) with NIAGARA HEALTH SYSTEM facility # 962 | 799464 | Raj Sreenivasan |
| May 17, 2019 | Changed Providence St. Joseph's and St. Michael's Healthcare (St. Michael’s Hospital Site) to Unity Health Toronto. Changed Facility Number from 852 to 980. | 803106 | Anthony Adesanya |

# Appendix-27: Interventional Radiology: Data Elements

| **#** | **Entity** | **Data Element** | **Column\_Name** | **Definition (Description)** | **Format** | **Valid values (Notes)** | **Applies to** | **Purpose and Use** | **Mandatory** | **Business key (Uniqueness)** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 01 | IR | Health Card Number | Health\_Card\_Number | Patient's Ontario Health Card Number. | CHAR(10) | Must be a valid ten-digit HCN | All | Unique patient identifier. Can be used to link data with other CCO data assets. | Yes | (Yes) |
| 02 | IR | Patient Chart Number | Patient\_Chart\_Number | Facility’s internal unique patient identifier. | CHAR (12) | Must be alpha-numeric (i.e. no punctuation, must have numbers and characters). | All | For investigations: chart number will be provided in log file for the records with errors. This will allow facilities to link data in log file with their data sets. | Yes |  |
| 03 | IR | Date of Birth | Date\_Of\_Birth | Patient birth date | CHAR (8) YYYYMMDD | Valid date  Must be later than 01-01-1900 | All | To calculate patient age (e.g., to ensure patient is over 18 years of age at time of procedure/treatment for funding). | Yes |  |
| 04 | IR | Postal Code | Postal\_Code | Patient’s residential postal code. | CHAR(10) | 1. Must match any of these format masks: ANANAN, NNNNN, NNNNN-NNNN, AA  2. If matches mask ANANAN, cannot begin with D,F,I,O,Q,U, or W  3. If matches mask AA, should match an entry in Appendix-3 (Province and State Codes). | All | To identify where a patient lives. | Yes |  |
| 05 | IR | Facility Number | Facility\_Number | Submitting facility number | CHAR(3) | Valid facility number MOHLTC classification listed in Appendix-3 | All | To determine which facility performed procedure/treatment. | Yes | (Yes) |
| 06 | IR | Date of Receipt of Referral | Date\_of\_Receipt\_of\_Referral | Date on which a request for initial consultation with a specialist is received in the specialist office for this service. If the specialist does not accept the referral at this time (e.g., referral form incomplete, workup not complete), this date does not change. If more than one RFA or TACE procedure is performed per patient, the date of receipt of referral is the date of referral for the first RFA or TACE procedure. | CHAR(8) YYYYMMDD | Valid date  Must be later than 01-01-1900 | All | Performance metrics - wait times | Yes |  |
| 07 | IR | Consultation Date | Date\_of\_Consultation | First date on which a patient sees the specialist for consultation regarding this specific problem/service | CHAR(8) YYYYMMDD | Valid date  Must be on or after date of receipt of referral. | All | Performance metrics - wait times | Yes |  |
| 08 | IR | Multidisciplinary Cancer Conference Review | MCC\_Review | Was this case discussed at MCC prior to the procedure? | CHAR(3) | If provided, must be one of the options in the drop down:   * Yes * No | All | Quality assurance | Yes |  |
| 09 | IR | Date of MCC | Date\_of\_MCC | Date of MCC review (if MCC Review is Yes) | CHAR(8) YYYYMMDD | Valid Date  If provided, must be on or before procedure date | All | Quality assurance | Yes if MCC\_Review = Yes |  |
| 10 | IR | Type of Ablation Procedure | Type\_of\_Ablation\_Procedure | Type of procedure used for ablation | CHAR(50) | Select from drop down:   * RFA - Radio Frequency Ablation * TACE - Conventional / Ethiodol Based * TACE - Drug Eluting Beads | All | Funding | Yes | (Yes) |
| 11 | IR | Procedure Date | Date\_of\_Procedure | Date of procedure | CHAR(8) YYYYMMDD | Valid Date  Must be on or after date of consultation and must be in current reporting period | All | Funding | Yes | (Yes) |
| 12 | IR | Specialty of Primary Operator | Specialty\_of\_Primary\_Operator | Specialty of Primary Operator | CHAR(80) | Select from drop down:   * Radiologist / Interventional Radiologist * Surgeon * Other, Specify | All | Planning | Yes |  |
| 13 | IR | Specialty, Other | Specialty\_Other | Other, Specify | CHAR(80) | Free text | All | Planning | Only if Specialty of Primary Operator = “Other, Specify” |  |
| 14 | IR | Procedure Site and Disease | Procedure\_Site\_and\_Disease | Procedure site and disease | CHAR(80) | Select from drop down:   * Liver - Hepatocellular carcinoma * Liver - Colorectal Cancer Metastases * Lung - Primary * Lung – Metastases * Kidney - Renal cell carcinoma | All | Funding | Yes | (Yes) |
| 15 | IR | Number of Probes Used | Number\_of\_Probes\_Used | Number of RFA probes used | Number (1) | Integer number between 1 and 9 | RFA Only | Funding | Optional |  |
| 16 | IR | Number of Lesions Treated | Number\_of\_Lesions\_Treated | Number of lesions treated | CHAR(50) | If provided, must be one of the options in the Drop down:   * 1 * 2 * 3 * 4 * 5 or more | RFA Only | Clinical criteria | For RFA Only |  |
| 17 | IR | Size of Largest Lesion | Size\_of\_Largest\_Lesion | Size (diameter) of largest lesion in cm | Number (2.1) | If provided, must be a number between 0.1 and 30.0 | RFA Only | Clinical Criteria | For RFA Only |  |
| 18 | IR | Image Guidance | Image\_Guidance | Type of image guidance used during the procedure | CHAR(50) | If provided, must be one of the options in the drop down:   * CT * Fluoroscopy * MRI * Ultrasound * CT + Ultrasound * CT + Fluoroscopy | All | Planning | Optional |  |
| 19 | IR | Tumour Access | Tumour\_Access | Level of procedure invasiveness | CHAR(50) | If provided, must be one of the options in the drop down:   * Percutaneous * Laparoscopic * Open Surgical | All | Planning / Quality | Optional |  |
| 20 | IR | Patient Stay | Patient\_Stay | Recovery needs of patient. Patients receiving a day procedure = Out-patient procedure; patients requiring an overnight stay = In-patient procedure. | CHAR(50) | If provided, must be one of the options in the drop down:   * In-patient procedure * Out-patient procedure | TACE Only | Funding | For TACE only |  |

# QA Checks

The QA checks are grouped by number as follows:

100’s - **File level checks**

200’s - **File format errors**: Entire record is rejected.  
300’s - **Rejected content errors**: Entire record is rejected.  
400’s - **Non-rejected content errors**: Entire record is retained, including erroneous field.  
500’s - **Apparent duplicate record warnings**: These are not necessarily errors, but could be.

# Validations: File Level Validations (Level 100)

The following rules will be applied and checked against every file submitted for SSO program.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **#** | **Type** | **Condition** | **Error Message** | **Reject** |
| 100 | System Error |  |  |  |
| 105 | Invalid Header | Header list in CSV file is incorrect | File Error- Header list is incorrect. | Yes |
| 106 | Incorrect number of Columns | Record in file has incorrect number of data elements | File Error- Record has incorrect number of data elements. | Yes |
| 103 | File name mask | File name does not follow the convention for file name mask: **IR\_nnn\_ffff\_ffffQx.csv**  Where:  IR: a fixed string indicating the program name (Interventional Radiology)  nnn: the three-digit code of the submitting site (e.g. 567)  ffff \_ffff: the two calendar years that make up the fiscal year separated by an underscore character (e.g. 2015\_2016)  Q: a fixed character for Quarter  x: the quarter within the fiscal, which is always an integer number between 1 and 4 (e.g. 3)  .csv: a fixed string indicating that the file includes comma-separated values.  **Example**: IR\_567\_2015\_2016Q3.csv  ***Note****: This validation should be non-case-sensitive so that, for example, the string "IR" can also be sent as "ir".* | File Error - File is incorrectly named. | Yes |
| 104 | Empty | File is empty  ***Note****: files with only one row (i.e. the header row is present and not patient level data) are considered valid. This error applies only when there is no such header.* | File Error - invalid number of data columns in “&file\_name” file. | Yes |
| 191 | No Data | File includes only one line, and that line is a valid header line.  ***Note****: This is a valid submission if there were no procedures in the reported quarter, so we issue a warning just to make sure.* | Warning - No data submitted. If there are data records, please resubmit. | No |
| 107 | Other errors | Unknown | Unknown error. |  |

# Validations: File Format Errors (Level 200)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Entity** | **Data Element** | **Condition** | **Error Message** | **Reject** |
| 201 | All | All Fields | Data field is too long | Invalid field length | Yes |
| 202 | All | All Date Fields | Date is not in YYYYMMDD format | Invalid - Must be in YYYYMMDD format  *(For optional date fields, ignore if null)* | Yes |

# Validations: Content Errors, Record Rejected (Level 300)

| **Number** | **Element #** | **Data Element** | **Column** | **Condition** | **Error Message** | **Reject** |
| --- | --- | --- | --- | --- | --- | --- |
| 300 | IR 01 | Patient Health Card Number | Health\_Card\_Number | Is Null | Invalid - Null Value | Yes |
| 303 | IR 01 | Patient Health Card Number | Health\_Card\_Number | Is not a valid ten-digit HCN  Ignore if Null | Invalid Ontario Health Card Number | Yes |
| 300 | IR 02 | Patient Chart Number | Patient\_Chart\_Number | Is Null | Invalid - Null Value | Yes |
| 302 | IR 02 | Patient Chart Number | Patient\_Chart\_Number | Contains special characters e.g. \*,/,{  Ignore if Null | Invalid Patient Chart Number - Contains non alpha numeric characters | Yes |
| 300 | IR 03 | Date of Birth | Date\_Of\_Birth | Is Null | Invalid - Null Value | Yes |
| 601 | IR 03 | Date of Birth | Date\_Of\_Birth | Is before 1900-01-01 | Date is before 1900-01-01 | Yes |
| 300 | IR 04 | Postal Code | Postal\_Code | Is Null | Invalid - Null Value | Yes |
| 304 | IR 04 | Postal Code | Postal\_Code | Matches mask ANANAN but begins with D, F, I, O, Q, U, or W. | Invalid Postal Code- Invalid Initial Letter | Yes |
| 305 | IR 04 | Postal Code | Postal\_Code | Matches mask of AA but does not match any entry in [Appendix 3](https://www.cancercare.on.ca/ext/databook/db1213/Appendix/Appendix_1-6_-_Province_and_State_codes.htm) (Prov/State Codes) | Invalid Postal Code (Prov/State) - consult lookup table in template. | Yes |
| 306 | IR 04 | Postal Code | Postal\_Code | Does not match mask: ANANAN, NNNNN, NNNNN-NNNN, AA  Ignore if Null | Invalid Postal Code- Invalid mask | Yes |
| 300 | IR 05 | Facility Number | Facility\_Number | Is Null | Invalid - Null Value | Yes |
| 301 | IR 05 | Facility Number | Facility\_Number | Does not match any legal entry in **Appendix-3**  Ignore if Null | Invalid Hospital Number - consult lookup table in template. | Yes |
| 300 | IR 06 | Date of Receipt of Referral | Date\_of\_Receipt\_of\_Referral | Is Null | Invalid - Null Value | Yes |
| 602 | IR 06 | Date of Receipt of Referral | Date\_of\_Receipt\_of\_Referral | Is before 1900-01-01 | Date is before 1900-01-01 | Yes |
| 300 | IR 07 | Consultation Date | Date\_of\_Consultation | Is Null | Invalid - Null Value | Yes |
| 603 | IR 07 | Consultation Date | Date\_of\_Consultation | Is before date of referral | Date of consultation cannot be before date of referral | Yes |
| 300 | IR 08 | Multidisciplinary Cancer Conference Review | MCC\_Review | Is Null | Invalid - Null Value | Yes |
| 399 | IR 08 | Multidisciplinary Cancer Conference Review | MCC\_Review | Is not a value in predefined list (Yes or No)  Ignore if Null | Invalid answer | Yes |
| 604 | IR 09 | Date of MCC | Date\_of\_MCC | Is not null when MCC\_Review = No | Since no MCC Review, no date of MCC is expected | Yes |
| 605 | IR 09 | Date of MCC | Date\_of\_MCC | Is later than procedure date  Ignore if Null | Date of MCC cannot be after date of procedure | Yes |
| 611 | IR 09 | Date of MCC | Date\_of\_MCC | DATE\_OF\_MCC IS NULL and MCC\_REVIEW = ‘Yes’ | Error: If the value of MCC\_Review is "Yes", Date\_of\_MCC should be mandatory | Yes |
| 399 | IR 10 | Type of Ablation Procedure | Type\_of\_Ablation\_Procedure | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |
| 300 | IR 11 | Procedure Date | Date\_of\_Procedure | Is Null | Invalid - Null Value | Yes |
| 606 | IR 11 | Procedure Date | Date\_of\_Procedure | Is before Date of Consultation  Ignore if Null | Date of procedure cannot be before date of consultation | Yes |
| 623 | IR 11 | Procedure Date | Date\_of\_Procedure | Is not in current reporting quarter  Ignore if Null | Date of procedure is not in the quarter being submitted | Yes |
| 300 | IR 12 | Specialty of Primary Operator | Specialty\_of\_Primary\_Operator | Is Null | Invalid - Null Value | Yes |
| 399 | IR 12 | Specialty of Primary Operator | Specialty\_of\_Primary\_Operator | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |
| 607 | IR 13 | Specialty Other | Specialty\_Other | Is null when Specialty\_of\_Primary\_Operator = Other | Since Specialty is Other, a description of the specialty is expected | Yes |
| 608 | IR 13 | Specialty Other | Specialty\_Other | Is not null when Specialty\_of\_Primary\_Operator <> Other | Since Specialty is not Other, a description of the specialty is not expected | Yes |
| 300 | IR 14 | Procedure Site and Disease | Procedure\_Site\_and\_Disease | Is Null | Invalid - Null Value | Yes |
| 399 | IR 14 | Procedure Site and Disease | Procedure\_Site\_and\_Disease | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |
| 613 | IR 15 | Number of Probes Used | Number\_of\_Probes\_Used | Not an Integer number between 1 and 9 and Type\_of\_Ablation\_Procedure = RFA  Ignore if Null | Invalid value. Value should be between 1 and 9. | Yes |
| 300 | IR 16 | Number of Lesions Treated | Number\_of\_Lesions\_Treated | Is Null and Type\_of\_Ablation\_Procedure = RFA | Invalid - Null Value | Yes |
| 399 | IR 16 | Number of Lesions Treated | Number\_of\_Lesions\_Treated | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |
| 300 | IR 17 | Size of largest lesion | Size\_of\_largest\_lesion | Is Null and Type\_of\_Ablation\_Procedure = RFA | Invalid - Null Value | Yes |
| 616 | IR 17 | Size of largest lesion | Size\_of\_largest\_lesion | Not a numeric value in “00.0” format  Ignore if Null | Invalid - Bad format. Must be a number of format XX.X | Yes |
| 617 | IR 17 | Size of largest lesion | Size\_of\_largest\_lesion | (Is not Null) AND ((Value < 0.1) OR (Value > 30.0)) | Invalid value. Size must be between 0.1 and 30.0 cm | Yes |
| 399 | IR 18 | Image Guidance | Image\_Guidance | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |
| 399 | IR 19 | Tumour Access | Tumour\_Access | Is not a value in predefined list Ignore if Null | Invalid answer | Yes |
| 300 | IR 20 | Patient Stay | Patient\_Stay | Is Null and Type\_of\_Ablation\_Procedure <> RFA | Invalid - Null Value | Yes |
| 399 | IR 20 | Patient Stay | Patient\_Stay | Is not a value in predefined list  Ignore if Null | Invalid answer | Yes |

# Validations: Content Errors, Record Not Rejected (Level 400)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Number** | **Entity** | **Data Element** | **Condition** | **Error Message** | **Reject** |
| 491 | Procedure Site and Disease | Procedure\_Site\_and\_Disease | Procedure Site and Disease <> 'Liver - Hepatocellular carcinoma' and Type\_of\_Ablation\_Procedure <> ‘RFA’ | A site other than "Liver - Hepatocellular carcinoma" was reported for a TACE procedure. Is this correct? | No |
| 492 | Number of Probes Used | Number\_of\_Probes\_Used | Is Null and Type\_of\_Ablation\_Procedure = ‘RFA’ | Warning: since "number of probes used" was not entered for an RFA procedure, it is assumed one probe was used. | No |
| 493 | Number of Probes Used | Number\_of\_Probes\_Used | Is not Null and Type\_of\_Ablation\_Procedure <> ‘RFA’ | Number of Probes Used was reported for a TACE procedure. This is expected only for RFA. | No |
| 494 | Number of Lesions Treated | Number\_of\_Lesions\_Treated | Is not Null and Type\_of\_Ablation\_Procedure <> ‘RFA’ | Number of lesions treated was reported for a TACE procedure. This is expected only for RFA. | No |
| 495 | Size of Largest Lesion | Size\_of\_Largest\_Lesion | Is not Null and Type\_of\_Ablation\_Procedure <> ‘RFA’ | Size of largest lesion was reported for a TACE procedure. This is expected only for RFA. | No |
| 496 | Patient Stay | Patient\_Stay | Is not Null and Type\_of\_Ablation\_Procedure = ‘RFA’ | Patient Stay Modality was reported for an RFA procedure. This information is not required for RFA. | No |
| 497 | MCC Review | MCC\_Review | Is not Null and MCC\_Review = ‘No’ | Please note that the procedure will not be funded because there was no Multidisciplinary Cancer Conference review. | No |

# Validations: Duplicate or Apparent Duplicate Records (Level 500)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **No.** | **Entity** | **Data Element** | **Condition** | **Error Message** | **Reject** |
| 501 | Uniqueness of procedure | Health Card Number  Facility Number  Procedure Date  Type of Ablation Procedure  Procedure Site and Disease | The five data elements (Health Card Number, Facility Number, Procedure Date, Procedure Type and Procedure Site and Disease) are the same for two records in the same file. | Error: Apparent duplicate records | Yes |
| 502 | Facility number | Facility Number | Facility number in the data does not match with the facility number selected on user interface. | Facility number mismatch | Yes |

# 

# 

# Appendix-1: Facility Numbers[[1]](#footnote-2)

|  |  |  |  |
| --- | --- | --- | --- |
| **#** | **Program Title** | **Submitting Hospital** | **Facility Number** |
| 27 | Interventional Radiology | Halton Healthcare Services | 950 |
| Hamilton Health Sciences Centre - JCC | 942 |
| Kingston Health Sciences Centre (KHSC) | 978 |
| Lakeridge Health | 952 |
| London Health Sciences Centre - University Hospital | 899 |
| London Health Sciences Centre - Victoria Hospital | 717 |
| London Health Sciences Centre | 936 |
| North York General Hospital | 632 |
| Royal Victoria Regional Health Center | 606 |
| Sinai Health System | 976 |
| St. Joseph’s Healthcare, Hamilton | 674 |
| St. Joseph’s Health Centre, Toronto | 898 |
| Grand River Hospital | 930 |
| Sunnybrook Health Sciences Centre | 953 |
| The Ottawa Hospital | 958 |
| Trillium Health Partners | 975 |
| University Health Network | 947 |
| Windsor Regional Hospital | 933 |
| Health Sciences North | 959 |
|  |  | Unity Health Toronto | 980 |
|  |  | Niagara Health System | 962 |
|  |  | Orillia Soldiers’ Memorial Hospital | 745 |

# Appendix-2: MOHLTC Master Numbering System[[2]](#footnote-3)

The Master Numbering System has been developed for the purpose of bringing together all Health Facilities and Programs under one system of identification. The list is a composite of health and health related units, facilities, clinics, programs and services. Each such organization has been assigned a unique four digit identifying code.

(For details, please refer Cancer Care Ontario's Data Book - 2012-2013, Appendix A: MOHLTC Master Numbering System, at link <https://www.cancercare.on.ca/ext/databook/db1213/documents/Appendix/CCO_Appendix_A_APR_12.pdf>).

# Appendix-3: Valid 2-digit Postal Codes[[3]](#footnote-4)

(Source: Cancer Care Ontario's Data Book - 2012-2013, Appendix B - Province and State codes, at link https://www.cancercare.on.ca/ext/databook/db1213/databook.htm).

The table below provides list of valid 2 digit postal codes for province and State codes.



1. This corresponds to appendix 3 on ALR [↑](#footnote-ref-2)
2. This corresponds to appendix 13 on ALR [↑](#footnote-ref-3)
3. This corresponds to appendix 11 on ALR [↑](#footnote-ref-4)