Reporting of salivary gland carcinomas
ICCR: Dataset for Salivary Cancers 2019

- Sept 8th 2019, ECP Nice, France
Carcinomas of major salivary gland

- relatively uncommon malignancies, morphologic overlap between tumor types makes accurate classification challenging
- significant differences in patient outcomes
- tumor type, tumor grading, high-grade transformation, extent of invasion, number and size of nerves affected, etc.
- types of ancillary studies are discussed in the context of daily application to specimens
ICCR Salivary Glands Expert Panel

- Raja Seethala (Chair – US)
- Alena Skalova (Czech Republic); Albina Altemani (Brazil); Douglas Gnepp (US); Robert Ferris (US); Isabel Fonseca (Portugal); Toshitaka Nagao (Japan); Göran Stenman (Sweden); Patrick Ha (US);

The purpose of Dataset for Salivary Cancers

- Facilitate discussion on the CORE elements for patients with carcinoma of the major salivary glands.
- The priority for this expert panel is to agree the elements, CORE and NON-CORE, for reporting of carcinomas of the major salivary glands.
- The list of elements in this document is the minimum requirement for reporting.
- In general, ICCR datasets cover malignant entities, either alone or in association with other pre-cancerous or non-invasive components.
Carcinomas of the Major Salivary Glands

- **Core data items**
  - are those which are essential for the clinical management, staging or prognosis of the cancer
  - Core elements are MANDATORY reporting items

- **Non-core data items**
  - are those which should be included in the dataset but not as a mandatory item
  - may be clinically important and recommended as good practice but are not yet validated or regularly used in patient management
Scope of Dataset for Salivary Cancers

- Reporting of resection and biopsy specimens of malignant neoplasms and associated carcinoma *in situ* arising from the major salivary glands
  - The protocol applies to all carcinomas of the parotid, submandibular, and sublingual glands
  - Melanomas, lymphomas, and sarcomas are dealt with in separate datasets
  - Minor salivary gland malignancies arising in the oral cavity, nasal cavity and paranasal sinuses, trachea, nasopharynx, oropharynx and hypopharynx and odontogenic specimens are staged according to their anatomical sub-site and are dealt with in separate datasets
  - Neck dissections and nodal excisions are dealt with in a separate dataset
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure

- **Non-core data items**
Carcinomas of the Major Salivary Glands

• Core data items
  ◆ Operative procedure
    ✓ wide distribution of subsites

• Non-core data items
Carcinomas of the Major Salivary Glands

**Core data items**

- Operative procedure
  - wide distribution of subsites
  - communication between the operating surgeon and the pathologist

**Non-core data items**
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure
    - wide distribution of subsites
    - communication between the operating surgeon and the pathologist

- **Non-core data items**
  - Ancillary studies
    - immunohistochemistry and molecular analysis
    - differential diagnosis
    - refine classification
    - prognostic and therapeutic applications
    - not yet strongly validated as standard of care
Carcinomas of the Major Salivary Glands

• **Core data items**
  - Operative procedure
  - Specimens submitted
    - superficial lobe only, deep lobe only, or total parotidectomy

• **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
  - superficial lobe only, deep lobe only, or total parotidectomy
  - sublingual and submandibular gland, partial or total gland excision

**Non-core data items**
- Ancillary studies
Carcinomas of the Major Salivary Glands

• Core data items
  ◆ Operative procedure
  ◆ Specimens submitted
    ✓ superficial lobe only, deep lobe only, or total parotidectomy
    ✓ sublingual and submandibular gland, partial or total gland excision
    ✓ ‘Not specified’ should be used rarely

• Non-core data items
  ◆ Ancillary studies
Carcinomas of the Major Salivary Glands

• **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality

• **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

◆ Core data items
  ♦ Operative procedure
  ♦ Specimens submitted
  ♦ Tumour focality
  ♦ Tumour dimensions

◆ Non-core data items
  ♦ Ancillary studies
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
    - Tumor size, specifically the largest dimension

- **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
  - Tumor size, specifically *the largest dimension*
  - macroscopically on the fresh specimen

**Non-core data items**
- Ancillary studies
Carcinomas of the Major Salivary Glands

• **Core data items**
  ◆ Operative procedure
  ◆ Specimens submitted
  ◆ Tumour focality
  ◆ Tumour dimensions
  ◆ Histological tumour type

• **Non-core data items**
  ◆ Ancillary studies
Histological tumour type

- Acinic cell carcinoma
- (Mammary Analogue) Secretory carcinoma
- Mucoepidermoid carcinoma
  - Low grade
  - Intermediate grade
  - High grade
- Adenoid cystic carcinoma
  - Tubular/cribriform pattern predominant
  - Solid pattern >30%
- Polymorphous adenocarcinoma
  - Classic
  - Cribriform
- Epithelial-myoepithelial carcinoma
- (Hyalinizing) Clear cell carcinoma
- Basal cell adenocarcinoma
- Sebaceous adenocarcinoma
- Intraductal carcinoma
- Cystadenocarcinoma
- Adenocarcinoma, NOS
- Salivary duct carcinoma
- Myoepithelial carcinoma
- Carcinoma ex pleomorphic adenoma
  - Intracapsular
  - Minimally invasive
  - Invasive
- Carcinosarcoma
- Poorly differentiated carcinoma: Neuroendocrine and non-neuroendocrine
- Lymphoepithelial carcinoma
- Squamous cell carcinoma*
- Oncocytic carcinoma
Mammary Analogue Secretory Carcinoma (MASC)
• PAC-classic variant (PLGA)
• PAC-cribriform variant (CATS)
• PAC-classic variant (PLGA)

• PAC-cribriform variant (CATS)

hot spot point E710D mutation in PRKD1 gene

translocations involving the PRKD1-3 genes
Carcinomas of the Major Salivary Glands

• **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
  - Histological tumour type
  - Histological grade
    ✓ independent predictor of behavior

• **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
  - Histological tumour type
  - Histological grade
    - independent predictor of behavior
    - role in optimizing therapy
    - positive correlation between histologic grade and clinical stage

- **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

• **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
  - Histological tumour type
  - Histological grade
    - independent predictor of behavior
    - role in optimizing therapy
    - positive correlation between histologic grade and clinical stage
    - intrinsic biologic behavior

• **Non-core data items**
  - Ancillary studies
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
- Histological tumour type
- Histological grade
  - independent predictor of behavior
  - role in optimizing therapy
  - positive correlation between histologic grade and clinical stage
  - intrinsic biologic behavior
  - generic grading scheme is not recommended

**Non-core data items**
- Ancillary studies
Carcinoma types for which grading systems exist and are relevant

- adenoid cystic carcinoma,
- mucoepidermoid carcinoma
- adenocarcinoma, not otherwise specified
- Additionally, with the new WHO classification, polymorphous adenocarcinoma is another tumor type that is to be graded!!
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
- Histological tumour type
- Histological grade
- Perineural invasion
  - **diagnostically useful**

**Non-core data items**
- Ancillary studies
- Depth and extent of nerve invasion
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
- Histological tumour type
- Histological grade
- Perineural invasion
  - extensive perineural invasion in hyalinizing clear cell carcinoma of the sublingual gland

**Non-core data items**
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
  - Histological tumour type
  - Histological grade
  - Perineural invasion
  - Lymphovascular invasion
  - ✓ diagnostic of malignancy

- **Non-core data items**
  - Ancillary studies
  - ✓ Depth and extent of nerve invasion
Carcinomas of the Major Salivary Glands

- **Core data items**
  - Operative procedure
  - Specimens submitted
  - Tumour focality
  - Tumour dimensions
  - Histological tumour type
  - Histological grade
  - Perineural invasion
  - Lymphovascular invasion
  - Extent of invasion
    - extraparenchymal extension - T3
    - Bone, skin and facial nerve involvement - T4a

- **Non-core data items**
  - Ancillary studies
  - Depth and extent of nerve invasion
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
- Histological tumour type
- Histological grade
- Perineural invasion
- Lymphovascular invasion
- Extent of invasion
- Margin status
  - increased risk for recurrence and decreased survival with positive surgical margins

**Non-core data items**
- Ancillary studies
- Depth and extent of nerve invasion
- Distance of tumour from closest margin
  - no data indicative of a prognostic difference
Carcinomas of the Major Salivary Glands

**Core data items**
- Operative procedure
- Specimens submitted
- Tumour focality
- Tumour dimensions
- Histological tumour type
- Histological grade
- Perineural invasion
- Lymphovascular invasion
- Extent of invasion
- Margin status
- **TNM descriptors (UICC 8th edition)**

**Non-core data items**
- Ancillary studies
- Depth and extent of nerve invasion
- Distance of tumour from closest margin
- Coexistent pathology
Thank you for your attention