BASAL CELL CARCINOMA – DIAGNOSIS AND MANAGEMENT

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STATUS OF RCM LITERATURE ON BCCs & DIAGNOSTIC FEATURES

TIPS TO INTEGRATE IN THE CLINICAL PRACTICE

RCM LITERATURE FOR BCC, SCC AND MELANOMA

RCM FEATURES FOR BCC

POPULATION OF ELONGATED NUCLEI
EPIDERMAL SHADOWING
NUCLEAR POLARIZATION STREAMING
TUMOR ISLANDS WITH PERIPHERAL PALISADING AND CLEFTING
INCREASED VASCULARITY WITH TRAFFICKING PHENOMENA

• Photodynamic Therapy (PDT)
• Lasers
• Cryotherapy
• Dressings
• Surgical excision

Combined treatments

Reports by year (cumulative)

ACCUMULATIVE
REFLECTANCE CONFOCAL MICROSCOPY

RCM

Allows non-invasive, in vivo examination of the skin at near-histopathological resolution

Enhances the accuracy of skin cancer diagnosis

The aim of this study was to identify key RCM features and test their diagnostic utility

Modified-Delphi method for identification of key features by experts

Evaluation of RCM cases by novice readers to test diagnostic utility of the selected key features

MODIFIED-DELPHI METHOD: EXPERTS

1. A list of 56 published RCM features was identified

2. Experts scored from 0 (irrelevant) to 10 (highly important) each of the 56 RCM features

3. 18 RCM features

4. Creation of a table of definitions in order to condensed the list of valued terms to four cytological and architectural key-terms of melanoma, BCC and SCC

RCM KEY-FEATURES FOR MELANOMA AND NMSC DIAGNOSIS

4 key features were defined

- ATYPICAL CELLS
- DERMAL-EPIDERMAL JUNCTION DISARRAY
- BASALOID CORDS/ISLANDS
- KERATINOCYTE DISARRAY

ATYPICAL CELLS

DERMAL-EPIDERMAL JUNCTION DISARRAY

BASALOID CORDS/ISLANDS

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CLINICAL VALIDATION STUDY

Evaluation of 100 cases by 10 novice-readers

Considering the presence of at least one of the four key features:

- Sensitivity for skin cancer was 91% (93% for melanoma, 92% for BCC and 77% for 233 SCC).
- Specificity was 57% (56% for nevi other than Spitz, 12% for Spitz neo, 77 % for solar lentigo, 81/Solaric keratosis, SL/seborrheic keratosis, SK/Lichen planus keratosis, LPLK and 94% for other benign non-melanocytic lesions).

Conclusion

A consensus shortlist may facilitate RCM dissemination to novice users
STATUS OF RCM LITERATURE ON NMSCs & DIAGNOSTIC FEATURES

OUTLINE

TIPS TO INTEGRATE IN THE CLINICAL PRACTICE

TIPS: Subtyping BCC

SUPERFICIAL
- Streaming
- Basaloid nests
- Dark silhouettes
- Peripheral palisading
- Increased vascularity
- Inflammation

NODULAR
- Basaloid nests
- Streaming
- Collagen surrounding islands
- Onion like structures or milia like cyst

INfiltrATIVE
- Basaloid nests
- Basaloid cords
- Basaloid cords connected to epidermis
- Dark silhouettes
- Cleft
- Increased vascularity
- Inflammation

BCC 88
nBCC 13
mBCC 22
Uni & Multivariate logistic regression

In vivo Diagnosis of Basal Cell Carcinoma Subtype by Reflectance Confocal Microscopy

A Retrospective Study of the Diagnostic Accuracy of In Vivo Reflectance Confocal Microscopy for Basal Cell Carcinoma Diagnosis and Subtyping

BCC 41
nBCC 21
mBCC 11
mixBCC 3

BCC 1 Subtype N (%)% Superficial 24 (23.1) Nodular BCC 49 (46.3) Aggressive BCC 11 (10.6) Total = 104

Diagnostic accuracy of confocal microscopy imaging vs. punch biopsy for diagnosing and subtyping basal cell carcinoma

BCC expert 100% 100%
Punch biopsy 93.94% 78.57%
**CLINICAL SITUATIONS**

To define histological subtype of BCC for optimal management

To decipher collisions and mimickers of BCC

To monitor tumor response to minimally invasive treatments

To define pre-surgical margins in vivo

To manage solitary pink lesions

**IN WHAT CLINICAL SITUATIONS DO I INTEGRATE CM IN MY CLINICAL PRACTICE?**

**TIPS: Monitoring**

PDT

Real-time noninvasive assessment of the outcome of methyl aminolaevulinate photodynamic therapy of basal cell carcinoma

RCM

Reflectance confocal microscopy allows in vivo real-time noninvasive assessment of the outcome of methyl aminolaevulinate photodynamic therapy of basal cell carcinoma

CRIO

Sequential treatment of actinic keratosis with cryotherapy and ingenol mebutate: reflectance confocal microscopy monitoring of efficacy and local skin reaction

CRIO

Cryosurgical management of basal cell carcinoma: in vivo follow-up using reflectance confocal microscopy

**TIPS: Deciphering mimickers**

Large, well-defined bright round tumor islands palisading and clefting

Atypical vessels / repression area / irregular blotches and dots

**CLINICAL AND LABORATORY INVESTIGATIONS**

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In vivo imaging of recurrences at subclinical stages may allow tumours to be surgically removed, or retreated with MAL-PDT at an interim phase of development, minimizing the patient's discomfort. Diagnostic techniques that enable the imaging of recurrences at subclinical stages may allow tumours to be surgically removed, or retreated with MAL-PDT at an interim phase of development, minimizing the patient's discomfort.

**Conflicts of interest**

None.
IN WHAT CLINICAL SITUATIONS DO I INTEGRATE CM IN MY CLINICAL PRACTICE?

- To define histological subtype of BCC for optimal management
- To decipher collisions and mimickers
- To monitor tumor response to minimally invasive treatments
- To define presurgical Margins in vivo
- To manage solitary pink lesions

TIPS: Pink lesions management

- Reducing unnecessary biopsies
- Helping pink lesions management
- Optimizing their best treatment option

SAVE THE DATE

New York, New York
May 29-30, 2020

The International Confocal Working Group’s
2nd World Congress on Confocal Microscopy