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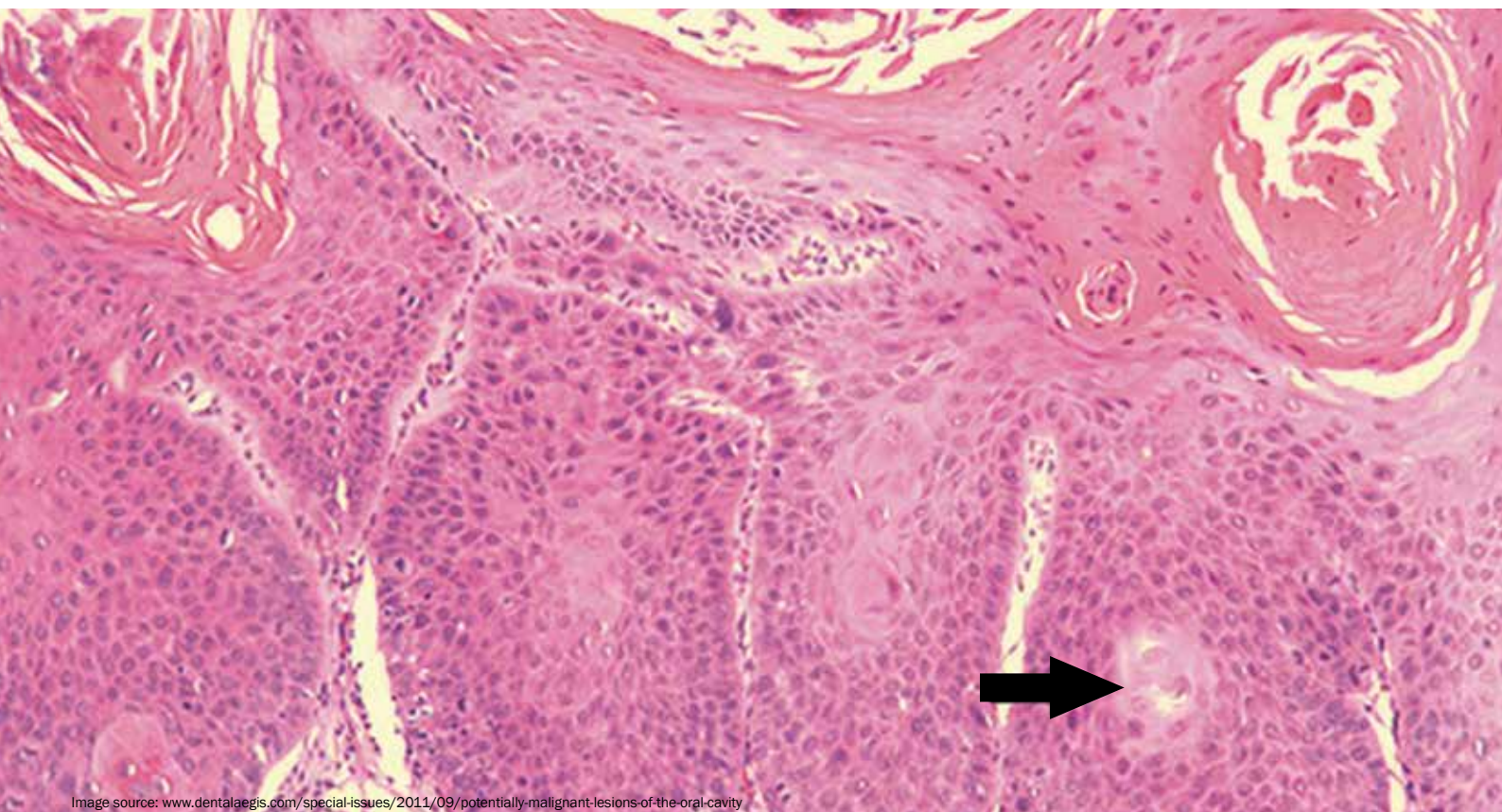


Image source: www.dentalaegis.com/special-issues/2011/09/potentially-malignant-lesions-of-the-oral-cavity

Potentially (Pre) Malignant Lesions of the Oral Cavity - Current Status

Dr Colin Ades FRCPA FFOP (RCPA), Consultant Histopathologist

Oral cancer, of which squamous cell carcinoma (OSCC) accounts for 96%, makes up around 3% of all malignancies with an incidence of 500,000 new cases per year worldwide. Major risk factors in Western countries are tobacco smoking and alcohol, which may have synergistic effects. In addition, smokeless tobacco and areca nut ('betel' nut) chewing are important risk factors, particularly in some parts of Asia and the subcontinent. Many cases are preceded by, or coexist with, oral potentially malignant lesions (OPML), principally leukoplakia. However, despite the precursor lesions being accessible to clinical examination, death from oral cancer remains high, in part due to delayed diagnosis and patients presenting with advanced stage disease.

Delayed diagnosis can be due to inadequate recognition of OPML and OSCC as well as the imprecise association of OPMLs with OSCC, both temporally and spatially, due to field affect and the complex process of carcinogenesis. As such, there is a considerable search for methods to better identify and categorise OPMLs so as to better stratify patients into predictive and prognostic groups.

Oral Potentially Malignant Lesions

LEUKOPLAKIA

This is the clinically significant subset of patients presenting with 'oral white lesions'. A recent WHO workshop defined leukoplakia as "a white plaque of questionable risk having excluded other known diseases or disorders that carry no increased risk for cancer". It is not a specific histological lesion or change, however, requires biopsy histology to exclude other specific diseases as causes of white plaques. These include: **Candidiasis**, in particular, **Chronic Hyperplastic Candidiasis; Oral Lichen Planus; Frictional Keratosis; Nicotinic Stomatitis** (local thermal injury from smoking); **lupus; actinic cheilitis and oral hairy 'leukoplakia'**.

Based on clinical appearance leukoplakia can be divided into **homogenous leukoplakia**, a uniform, white, flat, hyperkeratotic plaque, and **non-homogenous leukoplakia**, defined by either a nodular, verrucous or corrugated surface or red non-keratotic areas (**erythroleukoplakia**). **Erythroplakia**, although not technically leukoplakia, can be considered as one extreme end of erythroleukoplakia and is most strongly related to dysplasia and associated malignancy.

Leukoplakia has a prevalence of 0.5 to 3.46%. Tobacco or areca nut use is related in 70-90% with the remainder being by definition idiopathic. **Oral Epithelial Dysplasia (OED)** may or may not be present in biopsies of leukoplakia. Conventionally, it has been considered the gold standard in identifying patients at higher risk of progression to OSCC, with dysplasia implying up to a five-time increase in the risk of progression to OSCC compared to cases with simple leukoplakia. However, more recent studies have highlighted the high intra- and interobserver variability in diagnosis of OED and some studies have shown limited predictive value between dysplastic and non-dysplastic lesions and between the grades of dysplasia. This can be in part explained by the field effect of carcinogenesis, with OSCC arising in sites not biopsied and the modifying effects of the biopsy and any subsequent excision or ablation reducing the risk of progression at the site of identified dysplastic lesions. These limitations have triggered a search for better biological markers for OSCC risk. However, histopathology to confirm leukoplakia and to identify dysplasia remains the basis of management (*see diagnostic algorithm fig 1*). In addition, leukoplakia properly identified has always been and remains a risk factor and OPML on its own.

ORAL LICHEN PLANUS (OLP)

Historically, there has been debate as to whether OLP represents a risk for malignancy as there is difficulty clinically and histologically in distinguishing OLP from dysplastic leukoplakia with secondary lichenoid inflammation. However, currently OLP is considered an OPML. The efficacy of follow up and management of the risk in these cases is yet to be determined.

ORAL SUBMUCOUS FIBROSIS

This is a constellation of changes secondary to areca nut use dominated by constricting fibrosis of the submucosa.

OTHERS

Oral involvement by discoid lupus, dyskeratosis congenita and epidermolysis bullosa are rare causes of increased risk of OSCC.

Potential Advances in Detecting OPML - Future Promise

DIAGNOSTIC AIDS IN VISUALISATION OF LEUKOPLAKIA

Toluidine blue and other vital dyes have an established use in aiding in vivo visual identification of leukoplakia. They are experience and operator dependent. Other more complex and proprietary methods employ different forms of light and/or dyes including fluorescence. In the USA, FDA approved methods for use by primary care physicians or dentists include *Vizilite*, *Velscope* and *Identa 3000* systems. The utility of these has not been established.

ORAL BRUSH CYTOLOGY

This is a targeted sample less invasive than biopsy. Due to limitations, it is not indicated to replace incisional biopsy as a diagnostic standard for visible lesions. However, may have a role in the future if combined with emerging biological markers.

SALIVA

Exfoliated cellular elements supplying material for yet to be determined specific molecular biological markers is a holy grail of research in this area, but not yet available.

DNA PLOIDY BY FLOW CYTOMETRY ON BIOPSY TISSUE

This has been shown to correlate closely with the degree of dysplasia and malignancy as seen in biopsy specimens. It avoids some of the problems of subjectivity of histology, however, relies on the same tissue sample and is not a replacement for histopathology.

MOLECULAR MARKERS

Immunohistochemical identification of molecular markers such as cyclin-D1, p27 and p63 is a potential practical adjunct to biopsy histology. The above panel has been shown to parallel increasing severity of dysplasia but their use has not become established in routine practice. Similarly gene expression profiling by gene arrays shows correlation between many genes and OPMLs but are not at a stage of being utilised in clinical practice.

IDENTIFICATION OF HPV IN ORAL POTENTIALLY MALIGNANT LESIONS AND OSCC

HPV DNA is frequently identified in OPML and OSCC by a number of means. However, this is rarely productive in type, showing non-integrated viral DNA. There is no evidence that it has a significant causal role.

IDENTIFICATION OF HPV IN OROPHARYNGEAL CARCINOMA

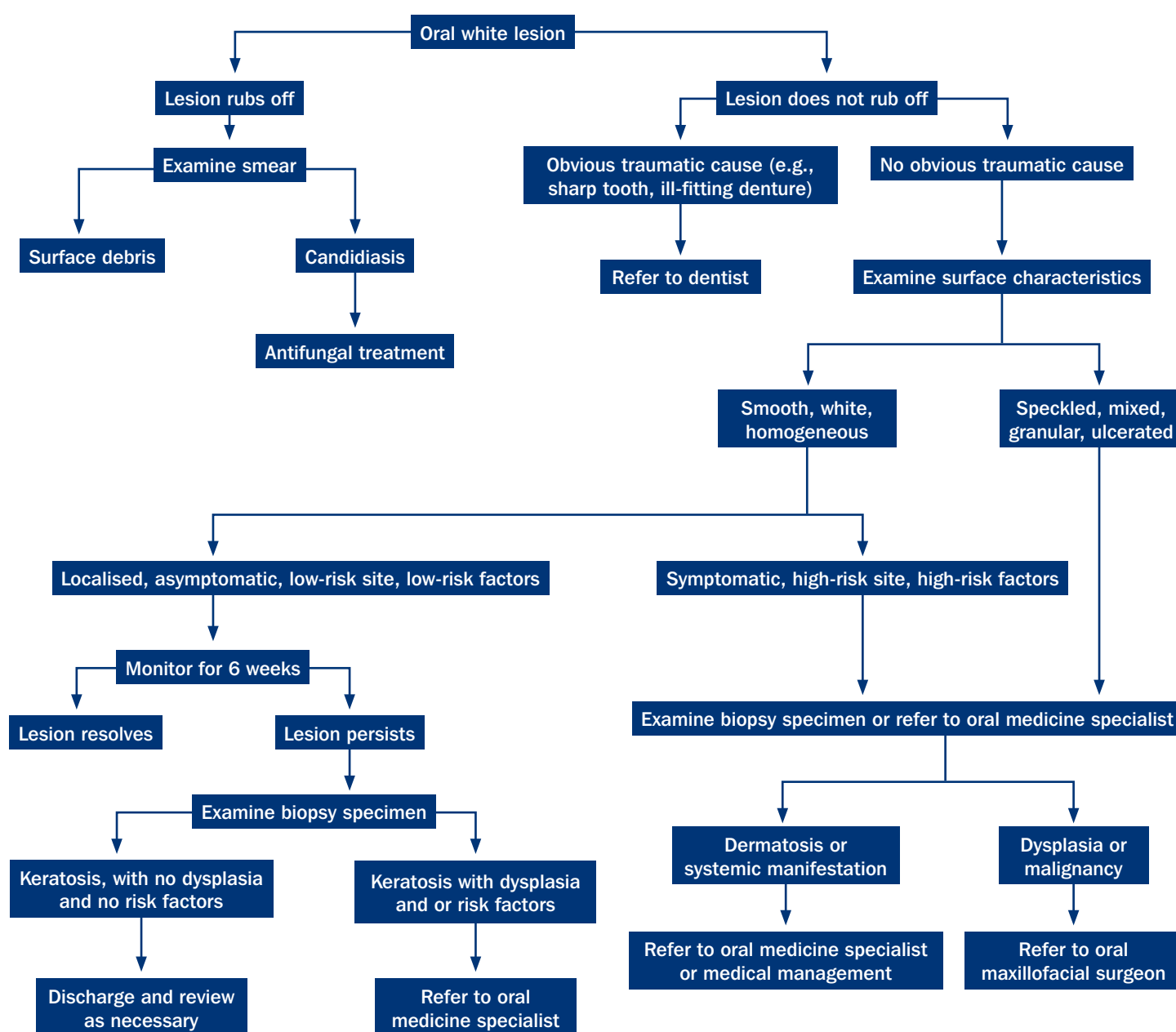
The above observations for HPV in OSCC is in stark contrast to SCCs arising in the oropharynx, principally palatine tonsil and other parts of the Waldeyer's ring. These are anatomically and biologically distinct from OSCC. If properly defined, they are associated with integrated HPV DNA, viral RNA transcription and expression of oncogenic viral proteins E7 and E6. Expression of these proteins results in functional compensatory overexpression of p16. Immunohistochemistry for p16 is a robust and clinically useful test which is a prognostic and predictive marker for improved survival and better response to chemoradiotherapy respectively in oropharyngeal SCC. Epidemiology shows an increasing incidence paralleling HPV exposure (frequency and age of onset of orogenital sex).

Identifying a marker of this type is the aim of much research in oral potentially malignant lesions and OSCC but remains elusive.

SELECTED REFERENCES

- Feller L, Lemmer J. Oral Leukoplakia as It Relates to HPV Infection: A Review. *Int J Dent*; 2012; ID 540 561.
- Dost F, LeCaio K, Ford PJ, Ades C, Farah CS. Malignant transformation of oral epithelial dysplasia: a real-world evaluation of histopathologic grading. *Oral Surg Oral Med Oral Pathol Oral Radiol*; 2013 Oct 17 Epub.
- Messadi DV. Diagnostic aids for detection of oral precancerous conditions. *Int J Oral Sci*; 2013; 5; 59-65.

Figure 1: Diagnostic Algorithm for Oral White Lesions



Source: Medical J Aust 2009 Mar;190(5)

Pathologist Profile

Dr Colin Ades FRCPA FFOP (RCPA)
CONSULTANT HISTOPATHOLOGIST

Phone: (07) 3121 4698
Email: DrColin.Ades@qml.com.au

Dr Colin Ades obtained his fellowship in 1990 and worked at the Royal Brisbane Hospital as a Staff Pathologist for two years. Subsequently he worked for nine years as a Senior Associate Pathologist at QML Pathology, before working for five years as a Partner at IQ Pathology. In 2008 he re-joined QML Pathology as a Consultant Histopathologist.

Special Interests: Head and neck, soft tissue, haematopoietic and gastrointestinal pathology.

Associations: Member Australasian Soft Tissue Tumour Registry, Fellow of the Faculty of Oral Pathology, RCPA.

QML Pathology Vaccines

The QML Pathology Vaccines Department operates as a distributor of private vaccines throughout Queensland and northern New South Wales. Whether it is childhood immunisation or overseas travel, QML Pathology is able to assist patients and doctors to obtain the necessary vaccines, delivered direct to their local surgery.

- A wide range of vaccines are available for sale at competitive prices, including those recommended for travel as well as specialised vaccines, such as Q fever vaccine.
- Our internationally recognised integrated cold chain network ensures the integrity and quality of our vaccines during transportation.
- Next day delivery is available (excluding orders placed on Fridays, weekends and public holidays) for practices located within metropolitan and regional centres throughout Queensland and northern New South Wales.
- Also available for purchase are commonly requested consumables, including multi-drug tests cups, chain of custody kits and international certificate of vaccination booklets.

FLU VACCINATION

Each year, flu vaccines are tailored to match the expected strains that circulate around the world. The flu vaccine is constantly changing, and the immunity following vaccination wanes after one year.

Therefore, it is necessary for vaccination to be performed every year for the vaccine to remain effective.

The 2014 trivalent influenza vaccine for Australia is recommended to contain the following strains:

- An A/California/7/2009 (H1N1) - like virus
- An A/Texas/50/2012 (H3N2) - like virus
- A B/Massachusetts/2/2012 - like virus

The 2014 influenza vaccine is available for purchase from QML Pathology (please see below). To order, please contact our Vaccines Department on (07) 3121 4523.



VACCINES CAN BE ORDERED BY EMAILING VACCUSTSERV@QML.COM.AU OR BY CALLING (07) 3121 4523

ZOSTAVAX®

Now Available from QML Pathology

ZOSTAVAX is a single dose vaccine indicated for the prevention of:

- Shingles in individuals ≥ 50 years of age
- Postherpetic neuralgia and for reduction of acute and chronic shingles-associated pain in individuals ≥ 60 years of age.

Approximately 1 in 3 people will develop shingles¹.

There is no way to predict who will develop shingles, when or how severe it will be.

For orders and enquiries, please contact the QML Pathology Vaccines Department.

1. Harpaz et.al. MMRW 2008 Jun 6; 57(RR-5):1-30

QML Pathology | Vaccines
Experts in Cold Chain Storage and Vaccine Distribution

Phone: (07) 3121 4523
Fax: (07) 3121 4944
Email: VaccCustServ@qml.com.au



Flu Vaccine Now Available

The 2014 Flu Vaccine is now available to buy in boxes of 10 and in single doses.

For orders and enquiries, please contact the QML Pathology Vaccines Department on (07) 3121 4523 or email VaccCustServ@qml.com.au.



Join the majority



With over 1000 participants, the QML Pathology Surgical Skin Audit is the biggest of its kind in Queensland.

Education Program Update

The QML Pathology Education Program went from strength to strength in the 2011-2013 triennium. Both our Surgical Skin and Cytology Pap Smear Audits provided thousands of doctors with valuable tools to review their clinical practice and improve patient care while earning education points.

With the new triennium now underway, both audits have already seen enormous growth with hundreds of doctors joining our education program. The new RACGP guidelines require doctors to undertake a Quality Improvement Category 1 activity. Both our histology and cytology audits fulfil said criteria, offering doctors a convenient opportunity to gain 40 Category 1 points for each calendar year of the triennium.

Our audits are not just for GPs. Points are also available for specialist dermatologists, plastic surgeons and skin cancer practitioners who participate in the Surgical Skin Audit, and for O&Gs who participate in the Cytology Pap Smear Audit.

For further information on QML Pathology's CPD program, please look on our website www.qml.com.au, email education@qml.com.au or ring our Education Coordinator on (07) 3121 4565.



RACGP

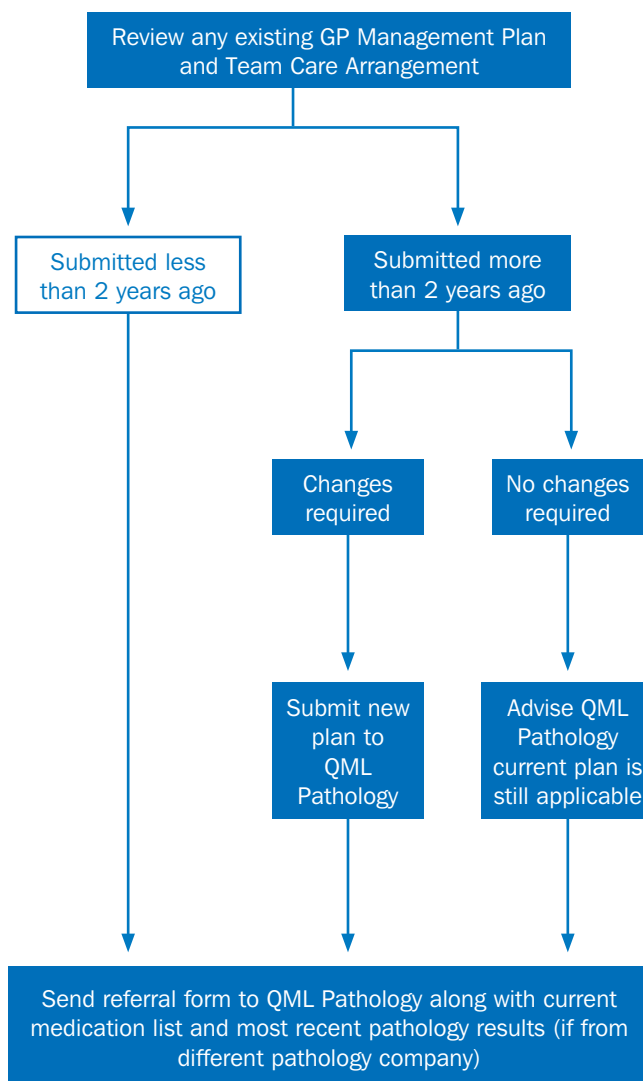
QI&CPD
Accredited Activity
CATEGORY 1



Re-enrol your patients in Qld's only 100% bulk billed* Diabetes Educator service.

Since the Diabetes Education Practice's inception in 2011, we have helped more than 3000 people with diabetes along their journey to better health. As one of Australia's fastest growing chronic diseases it is important that we continue to take a proactive approach toward its prevention and management.

To re-enrol your patients for 2014:



If you need a list of your patients enrolled in the Diabetes Education Practice, please contact our administration team on email: diabetes@qml.com.au or phone: 1300 768 331.

*For Medicare Cardholders

Diabetes Education Practice



Collection Centre Updates

NEW COLLECTION CENTRES

BRISBANE(07) 3221 4524

Level 5, 243 Edward St
Opening Hours:
Mon – Fri: 7.00am – 4.00pm

BRISBANE(07) 3211 2222

Terry White Chemist
The Myer Centre, Shop 103, Level E
91 Queen St
Opening Hours:
Mon – Fri: 8.00am – 12.30pm
1.00pm – 4.00pm

BEERWAH(07) 5494 6575

Beerwah Medical Centre
15 Turner St
Opening Hours:
Mon – Fri: 7.00am – 12.00pm
12.30pm – 4.00pm

CHERMSIDE.....0402 974 768

Chermside Westfield
Smart Clinics
Shop 212
Cnr Gympie and Hamilton Rds
Opening Hours:
Mon – Fri: 8.30am – 1.00pm
1.30pm – 2.00pm

DOUGLAS(07) 4779 5872

Townsville Hospital
Medilink Retail Centre
100 Angus Smith Dr
Mon – Fri: 8.00am – 4.00pm

KIRWAN.....(07) 4795 6400

Shop 9B, The Avenues Plaza
Cnr Kern Brothers Dr and Burnda St
Mon – Fri: 8.00am – 11.00am

MALANDA.....(07) 4095 6889

27 English St
Mon – Fri: 7.00am – 12.00pm

MORANBAH(07) 4941 7268

Town Centre Surgery
Town Square Ave
Mon – Fri: 8.00am – 11.00am

MOUNTAIN CREEK.....(07) 5437 8216

Shop 9C
Brightwater Shopping Centre
69 - 79 Attenuata Dr
Mon – Fri: 8.00am – 12.00pm

OXENFORD.....(07) 5514 3927

2 Leo Graham Way
Mon – Fri: 7.00am – 5.30pm
Sat 8.30am – 11.30am

For a complete listing of QML Pathology collection centres, please visit our website: www.qml.com.au.

BD SurePath™ Liquid-based cytology

- 100% of sample sent to lab
- Only BD SurePath™ has an FDA-approved claim for a 64.4% increase in HSIL+ detection over conventional Pap tests
- Less than 1% unsatisfactory cases
- Sample is also suitable for the detection of HPV, Chlamydia and Gonorrhoea
- Affordable price of \$45.00*

Exclusive to QML Pathology

References:

1. Desai M, Role of Automation in Cervical Cytology, Diagnostic Histopathology 2009, 15:7, p323-329
2. Freemont-Smith M, Marino J, Griffin B, Spencer L and Bollock D, Comparison of the SurePath™ liquid-based Papanicolaou Smear with the Conventional Papanicolaou Smear in a Multi site Direct-to-Vial Study, Cancer Cytopathology 2004, 102:5, p269-279.
3. Kirschner B, Simonsen K and Junge J, Comparison of Conventional Papanicolaou Smear and SurePath™ liquid-based cytology in the Copenhagen population screening programme for cervical cancer, Cytopathology 2006, vol 17, p187-194.

*Prices are correct at time of printing and subject to change

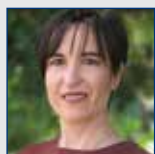


Warfarin Care Clinic Easter Hours

QML Pathology wishes to advise that over the upcoming Easter period, the Warfarin Care Clinic will not be accepting any NEW REGISTRATIONS as from 5.00pm Monday, 7 April 2014. This service will re-open from 8.00am Monday, 28 April 2014.

During this period, it is essential that any new patients on Warfarin are supplied with instructions and/or referred to their local doctor for supervision. Patients who are currently monitored by QML Pathology and are being discharged from hospital will be accepted over this period.

Doctor's Noticeboard



DR RALUCA FLESER
MBBS RACP RCPA
Clinical Haematologist

Dr Fleser has commenced private practice at North West Hospital and North Lakes.

After graduating with a Bachelor of Medicine in 1996, Raluca became a Specialist in Internal Medicine before moving from Europe to Australia in 2002.

From 2002-2013, Raluca undertook postgraduate physician training followed by specialist training in clinical and laboratory haematology at both the Mater and Princess Alexandra Hospitals.

Raluca's interests include general haematology, pregnancy related haematological issues, and diagnostic and management of haematological malignancies with the focus on lymphoma and myeloma.

She is a member of the Haematology Society of Australia and New Zealand (HSANZ), and a fellow of the Royal College of Pathologists of Australasia (RCPA) and the Royal Australasian College of Physicians (RACP).

Suite 4
North West Specialist Centre
137a Flockton St
Everton Park QLD 4053
P: (07) 3353 9026
F: (07) 3353 6027
E: admin@ralucafleser.com.au



DR RACHEL GREEN
MB ChB FRANZCOG
Obstetrician and Gynaecologist

Dr Green wishes to advise her colleagues that she has moved into her own private practice effective 3 February 2014.

10 Gray St, Ipswich QLD 4305
P: (07) 3281 4899
F: (07) 3202 1588
E: drgreenmedical@gmail.com
W: www.drrachelgreen.com.au

DR CORINNE YOONG
General Dermatologist

Dr Yoong is a General Dermatologist with a special interest in the treatment of acne, eczema, psoriasis, and cutaneous malignancies as well as vulval diseases. Corinne trained in Queensland and is a fellow of the Australasian College of Dermatologists. Corinne is an experienced clinician with a fellowship of the Royal Australasian College of General Practitioners, as well as holding a Diploma in Obstetrics and Gynaecology from the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

Dr Yoong commenced at South East Dermatology in March 2014.

South East Dermatology
1202 Creek Rd
Carina Heights QLD 4152
P: (07) 3843 0577
F: (07) 3398 2156
E: info@sebderm.com.au
W: www.sebderm.com.au

DR KAH MUN YEE
MBChB FRACGP AFRACMA FACHPM
Palliative Medicine Specialist

Dr Yee completed medical training at Otago in 1998 and completed training in Palliative Medicine at the Wesley and St Vincent's Hospitals, Brisbane with experience at St Joseph Mercy Hospice in Auckland and Peter MacCallum, Melbourne. She concurrently holds a position as MSRPP at Boonah Hospital since 2005 and teaches MBBS students, QRME registrars, ACRRM and ACEM trainees.

She is taking private referrals for end of life care, complex symptom management in patients with malignancy. Her rooms are located at:
Leonard Street Medical Centre
11-17 Leonard St
Boonah QLD 4310
P: (07) 5463 2266
F: (07) 5463 2808

VACANCIES

FEMALE GP VR FT/PT REQUIRED CALOUNDRA – SUNSHINE COAST

Our practice needs one more doctor to complete our team. We currently have 3 female and 4 male doctors.

- Hours negotiable, preferably 4-5 days per week
- Good working hours 8.00am to 5.00pm Monday to Friday
- Saturday mornings only on rotation
- No after hours

Option available to work with our team for 3 months as maternity leave replacement before commencement of contract.

We have a busy practice with a growing database and need an additional doctor to meet the high demand at our long established practice. Located on a busy road, near a shopping complex, close to the beach, we are within minutes of the new sunshine coast university hospital precinct.

Large modern premises with fully equipped treatment room, accredited and fully computerised, using best practice software. Fulltime nursing and reception support.

We are a mixed billing practice with chemist, pathology, specialists, clinical psychologist and allied health on site.

Contact the practice manager on:

Ph: (07) 5491 9044

Email: currimundi@cmcnet.com.au

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If you wish to place a notice, please email details to info@qml.com.au.



*Join our email list to receive e-newsletters, test updates and more.
Simply email your name and provider number to info@qml.com.au
with the subject line 'email list'.*

Infectious Diseases Report

GEOGRAPHIC DISTRIBUTION - JANUARY 2014

ORGANISM	Regions (as per key below)															TOTAL			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	JAN	DEC	NOV	OCT
Adenovirus (not typed)	2	3	1		1		6		5	2	7	3	3	2	1	36	55	103	101
Adenovirus (typing pending)		1	1				2		4	3	1	3			1	16	12	18	13
Barmah Forest virus	7	6	2	1			3		6	4	4	9	4	4	2	52	40	21	25
Bordetella pertussis	2	10	7	3		1	14		21	6	31	16	9	2	3	125	96	141	151
Brucella species	4	2									2			1		9	6	6	10
Campylobacter jejuni																0	1	0	0
Chlamydia pneumoniae																0	0	0	0
Chlamydia trachomatis, not typed	55	104	43	28	2		113	1	62	40	174	56	35	40	19	772	610	725	740
Coxiella burnetii		2	1				1				1	3	1			9	3	6	7
Cryptococcus species												1				1	3	1	2
Cytomegalovirus (CMV)	1	6	2	4	1		11		7	2	12	2	1	2	2	53	53	67	78
Entamoeba histolytica																0	0	0	0
Enterovirus - not typed																0	0	0	0
Epstein-Barr virus (EBV)	4	30	11	4	1		18		22	1	47	13	6	2	7	166	172	199	217
Flavivirus unspesified	26	1		2			2		1	1	5	4				42	24	16	18
Hepatitis A virus			1		1						1					3	10	7	1
Hepatitis B virus	3	6	3	2	1		9		6	2	49	3	2	1	1	88	75	86	115
Hepatitis C virus	21	41	20	7	3		32		21	15	82	20	19	13	12	306	220	321	339
Hepatitis D virus																0	0	2	2
Hepatitis E virus																0	0	0	0
Herpes simplex Type 1	20	64	20	7	1		52		33	10	79	32	6	13	13	350	289	308	351
Herpes simplex Type 2	12	42	12	2	1		22		11	5	43	21	2	10	6	189	173	219	205
Herpes simplex virus - not typed																0	0	0	0
HIV-1							7		1		5					13	15	11	13
HTLV-1																0	0	0	0
Human Metapneumovirus	2	3					7		1	1	4	2				20	14	39	42
Influenza A virus	5	16	4	3	1		13		5	2	27	19	3	4	1	103	56	68	98
Influenza B virus	3	2	2				3		2		1	3	2			18	49	61	91
Legionella pneumophila (all serogroups)		2	1	1			2		1	1	3	3			1	15	20	34	65
Legionella species	1	2	4						2	1	1	3	1		2	17	16	36	68
Leptospira species												2	2			4	10	3	1
Measles virus		3														3	0	2	0
Mumps virus											1					1	0	0	0
Mycoplasma pneumoniae	17	100	50	12	2		71		92	34	164	64	26	21	15	668	559	736	966
Neisseria gonorrhoeae	11	11	5				20	1		1	10	1	1	2		63	49	39	58
Parainfluenza virus	2	15	3				9		10	1	16	5	1	2	1	65	116	121	141
Parvovirus	1	2					9					1				13	9	10	25
Pneumocystis carinii							1									1	0	2	0
Respiratory Syncytial virus	2	5			1		3	1	1		8	1	1	1	1	25	23	25	34
Rhinovirus (all types)	1	5	6	1			6		7	5	23	4	2	2	1	63	141	209	172
Rickettsia - Spotted Fever Group		1					1									2	6	5	5
Ross River virus	5	1	4						1	1	5	2	2	6	3	30	32	47	30
Rubella virus																0	0	1	0
Salmonella paratyphi A																0	0	0	0
Salmonella paratyphi B											1					1	2	1	0
Salmonella typhi																0	2	2	0
Streptococcus Group A	7	7	3	2	3		8		13	7	15	9	7	5		86	94	122	117
Toxoplasma gondii		1	1	1			2									5	9	11	10
Treponema pallidum	27	5	7		13		53	1	6	7	37	9	4	19	2	190	120	148	165
Trichomonas vaginalis	10		1		3				1	2	1			7	1	26	20	27	37
Varicella Zoster virus	18	38	16	6			47		24	3	62	24	8	10	10	266	227	257	258
Yersinia enterocolitica																0	0	0	0
TOTAL	220	506	221	72	18	10	442	7	374	128	789	303	113	123	105	3431	3431	4263	4771

REGIONS:

1 Cairns

2 Gold Coast/Northern Rivers

3 Ipswich

4 Mackay

5 Mount Isa

6 New England

7 North Brisbane Suburbs

8 Northern Territory

9 Redcliffe

10 Rockhampton

11 South Brisbane Suburbs

12 Sunshine Coast

13 Toowoomba

14 Townsville

15 Wide Bay/Burnett

FURTHER HISTORICAL CLINICAL DATA CAN BE OBTAINED BY CONTACTING MARKETING ON INFO@QML.COM.AU.