



Royal College of Obstetricians & Gynaecologists

Challenges and Opportunities In The Prevention of Cervical Cancer In Jordan

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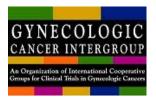
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Objectives



- Cervical Cancer in Jordan
- Facts about cervical screening in Jordan
- Prevalence of HPV infection in Jordan
- Cervical screening using cytology versus HPV testing



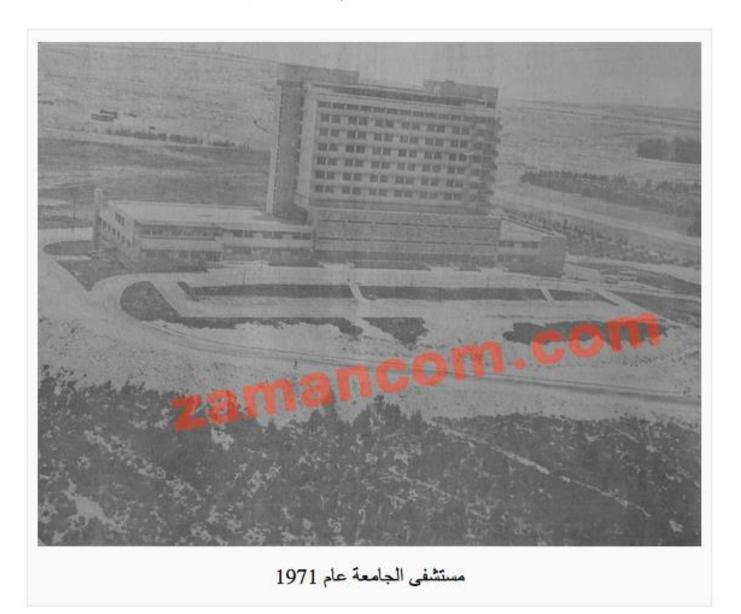
الفصل لثالث والخمسون فى علاج السرطان
فى ذكرنا فى التقسيم الواع السرطان وكيف السبيل الى علاجه بالادوية والتحرس
منهاد والمحديد لتلاتيق وقدذكرنا السمطان المتولد في الرجم والتحرزمن
علاجه وقدذكوت كاوائل متىكان السيطان فى موضع يكن استيصاً له كله كالسرطان
الناى يكون فى الذرى اوالغن وغوهامن الاعضاء المتكنة لاخراجه جله لاسيما
انكان مبتد ياصغيراوامامق ورج وكان عظيمًا فلاينبني ان يقربه فأنى ما استطعد
ان ابن احلامنه ولارأيت قبلى فصل الخلف والعل فيه اذاكان متكناكما قلن
ان يتقدم وشهل العليل من المرة السوداء مرارات فقصد لان كان في العروق المتلا
المتنصب تصبة تكن فيها بالعل تحريلنى فحالسوان الصنائيرالتى تصلح له متم تغور لا
منكلجة مع الجل على استقصاء حتى لايبقى شيئامن اصوله وانزاد الم يجوس
لاتقطعه سرييابل اعصر الموضع واسلت الدم الغليظ كله بيداد اوبما امكنكمن
- 116

رهراوى 111-الباب التأنى الفصل لحادى والسبعون في قطع البظر والمحمو النات ف فروج النساء البظرد بكذادت على لاصرا لطبيعى حتي يمج ويقبر منظرة وقد يعظوفى بعص النساء حتى يغض سبال لرجال سيرعيهم الجاع فينعلى تمدف فضل النظر سيداد او بصنارة وتقطع والمتعن فالقطع والسياق عمق الاصل لطلايع رض نزف اللام تفرتع الجه بمأتق الج الجوا. كات حتى يبرأ ان شاء الله تعالى وآما اللجم الناب فهو لحمرينب لا أعا الرحم احتى يلأه وربمأخرج الى خارج على مثل الذنب ولذلك تسميد الاوابش المول لذنع فينبغى ان تقطعه كما نقطع البظروتع المجه حتى يبرأ ان شاء الله تعاد.

الفصل التألت والسبعون فى علاج البواسير والتاليل و البتورالحمرالتي تعرض في فروج النساء امالبواسيرفهوا نتفاخ افواة العروق ستى يسيل منها الدم كخيرا داعافاذ اقدمت البواسي صارت ثاليل وقدذكرت فى التقسيم انواع كما وعلاجاتها ونذك فضامنها ماتقبل العلاج ومألا تقبله فأقول ان البواسير والثاليل اذ اكانت فى عمق الرحم ولم تظهد للحس فليس فيهاعلاج بالحدرب ومتىكان منها ف فوالرحم يقع عليها الحس فحى التي سالج فينبغى ان تد خل لامراء فى بيت بارد متم مما الثاليل بمنقاش ا وعزقة

لبابالثان ذهراوى فالرحم قد يعرض في الرجم انواع كنيرة من الاولام كالسرطان في الورم المتجود القرام والله بيلة والمكنة والنواصير والشقاق والتأليل والودم الحارد قد ذكرنا جميع هذه الامراض وانواعها وعلاجاتها في التقسيم فينبغل ن اذكرة في هذه المقالة الورم الحارالذى تعرض في فوالزجم اذاكان من الاورام التي تجمع مدة تكون بطها بالحد بد في نبغي

مشهد اختفى من عمان للأبد. مستشفى الجامعة في منطقة خالية من السكان (صورة من عام 1971)









كم مرة يجب علي إجراء مسحة عنق الرحم؟

بعد القيام بمسحة عنق الرحم لأول مرة، يوصى النساء بإعادة <u>الفحص مرة واحدة فى السنة</u>. يمكن أن تقومي باختيار شـهر معين في السـنة (كشـهر عيد ميلادك مثلا) والترتيب لإجراء جميع الفحوصات الدورية خلال هذا الشـهر، حتى يصبح من السـهل عليك تذكر موعد الفحوصات.

ما هي كلفة إجراء مسحة عنق الرحم؟ تبلغ كلفة إجراء مسحة عنق الرحم في عيادة الكشف المبكر في مركز الحسين للسرطان **20 دينار أردني** (16 دينار أردني لمشتركي برنامج "رعاية"). اطلع على <u>قائمة الأسعار</u> للحصول على قائمة كاملة بفحوصات الكشف المبكر التي تقدمها عيادة الكشف المبكر.

- Jordan has a population of 2.36 millions women ages 15 years and older who are at risk of developing cervical cancer
- Current estimates indicate that every year 50 women are diagnosed with cervical cancer and 19 die from the disease (WHO,2013)
- The incidence of cervical cancer has increased in the last 10 years from 23 cases in 2004 and 40 cases in 2007 to 50 cases in 2013 (ICO information center, 2013)

Facts about cervical screening in Jordan

Among ever-married Jordanian women aged 35 or more, the life time prevalence of Pap smear was 14.3% in 2008 and 27.8% in 2012
Only 7% of Jordanian women had a cervical smear within the last 3 years.

Amarin ZO, Badria LF, Obeidat BR. Attitudes and beliefs about cervical smear testing in ever-married Jordanian women. East 2008;14(2):389-97.

ICO Information Centre on HPV and Cancer

Jordan Human Papillomavirus and Related Cancers, Fact Sheet 2016 (2016-12-15)

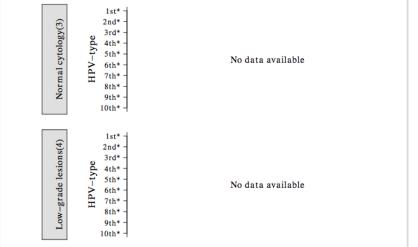


I. Key data on HPV and HPV-related cancers



Jordan has a population of 2.38 millions women ages 15 years and older who are at risk of developing cervical cancer. Current estimates indicate that every year 50 women are diagnosed with cervical cancer and 19 die from the dis-

ease. Cervical cancer ranks as the 15th most frequent cancer among women in Jordan and the 10th most frequent cancer among women between 15 and 44 years of age. Data is not yet available on the HPV burden in the general population of Jordan. However, in Western Asia, the region Jordan belongs to, about 2.3% of women in the general population are estimated to harbour cervical HPV-16/18 infection at a given time, and 72.4% of invasive cervical cancers are attributed to HPVs 16 or 18. Figure 1. Comparison of the ten most frequent HPV oncogenic types in Jordan among women with and without cervical lesions



Vaccine. 2013 Dec 30;31 Suppl 6:G51-7. doi: 10.1016/j.vaccine.2012.06.046.

Overview of cervical cancer screening practices in the extended Middle East and North Africa countries.

Sancho-Garnier H¹, Khazraji YC², Cherif MH³, Mahnane A⁴, Hsairi M⁵, El Shalakamy A⁶, Osgul N⁷, Tuncer M⁷, Jumaan AO⁸, Seoud M⁹.

Author information

Abstract

National Organized Cervical Cancer Screening (NOCCS) programs are lacking in most of the "Extended Middle East and North Africa" (EMENA) countries. Consequently, most cervical cancers are diagnosed late and are associated with high mortality. In fact, in most of these countries, national mortality data are unknown due to the absence of population-based mortality registries. Most countries of the EMENA practice more or less limited opportunistic, cytology-based, screening tests, which often lack guality assurance and follow-up care. A few countries, within the initiation of a National Cancer Control Plan, have just started to implement organized screening programs using, for cervical cancer detection, visual inspection with acetic acid (Morocco) or cytology (Turkey). Moreover, most countries of the EMENA lack national guideline, as well as resources for the management of abnormal cytologic screening (or any other screening test). The main obstacle for the implementation of NOCCS is a lack of political understanding to support such public health programs and provide the necessary resources. Other obstacles that hinder the participation of women in cervical screening include a lack of knowledge of the disease, socioreligious and cultural barriers, and geographic and economic difficulties in accessing medical services. These countries are already convinced that prevention of cervical cancers in women who have cervical intraepithelial neoplasia is possible through various screening and treatment algorithms, but most countries still need to invest in well organized programs that can reduce cervical cancer incidence and mortality in women. This article forms part of a regional report entitled "Comprehensive Control of HPV Infections and Related Diseases in the Extended Middle East and North Africa Region" Vaccine Volume 31, Supplement 6, 2013. Updates of the progress in the field are presented in a separate monograph entitled "Comprehensive Control of HPV Infections and Related Diseases" Vaccine Volume 30, Supplement 5, 2012.

Vaccine. 2013 Dec 30;31 Suppl 6:G58-64. doi: 10.1016/j.vaccine.2012.06.097.

Prospects and challenges in the introduction of human papillomavirus vaccines in the extended Middle East and North Africa region.

Jumaan AO¹, Ghanem S², Taher J³, Braikat M⁴, Al Awaidy S⁵, Dbaibo GS⁶.

Author information

Abstract

The development of effective and safe human papillomavirus (HPV) vaccines provides a great opportunity to prevent a devastating disease, cervical cancer, and a host of other related diseases. However, the introduction of these vaccines has been slow in the Extended Middle East and North Africa (EMENA) region. Only one country has introduced the vaccine and few countries plan HPV vaccine introduction in the coming 5 years. Several factors influence the slow uptake in the region, including financial constraints, weak infrastructure for adolescent vaccine delivery, competition with high priority vaccines, and lack of reliable data on the burden of HPV disease. Other barriers include cultural and religious sensitivities, as the vaccines are offered to prevent a sexually transmitted disease in young girls. Recommendations to enhance HPV vaccine introduction in EMENA countries include establishing a regional joint vaccine procurement program, enhancing the adolescent vaccination platform, documenting the burden of cervical cancer, strengthening local National Immunization Technical Advisory Groups and designing Information, Education and Communication material that address cultural concerns. This article forms part of a regional report entitled "Comprehensive Control of HPV Infections and Related Diseases in the Extended Middle East and North Africa Region" Vaccine Volume 31, Supplement 6, 2013. Updates of the progress in the field are presented in a separate monograph entitled "Comprehensive Control of HPV Infections and Related Diseases" Vaccine Volume 30, Supplement 5, 2012.

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Do we really need a cervical screening program?

Figure (11) Percentage distribution of the top ten cancers by gender (all ages)

N	Iales No =	2280			Femal	es No =	2518	
Colo-rectal	12	.7					36.8	Breast
Lung	11.2			10.5				Colo- rectal
Lymphoma		8.6			7.5			Lymphoma
Leukemia		8.3			5.6			Thyroid
U.Bladder	%	8.1			4.5	0/	6	Leukemia
Prostate		7,9			4.1			Corpus Uteri
Brain & CNS		4.4		3.1				Stomach
Larynx		3.9		3.0				Ovary
Stomach		3.0		2.9				Brain & CNS
Kidney		2.6		1.8				Liver.biliary
Other Sites	29.4			Contraction of the local division of the loc		20.2		Other Sites
	30	20 10	0	10	20	30	40	

The Most Frequent Cancers In Women Worldwide (In Thousands of New Cases Per Year)

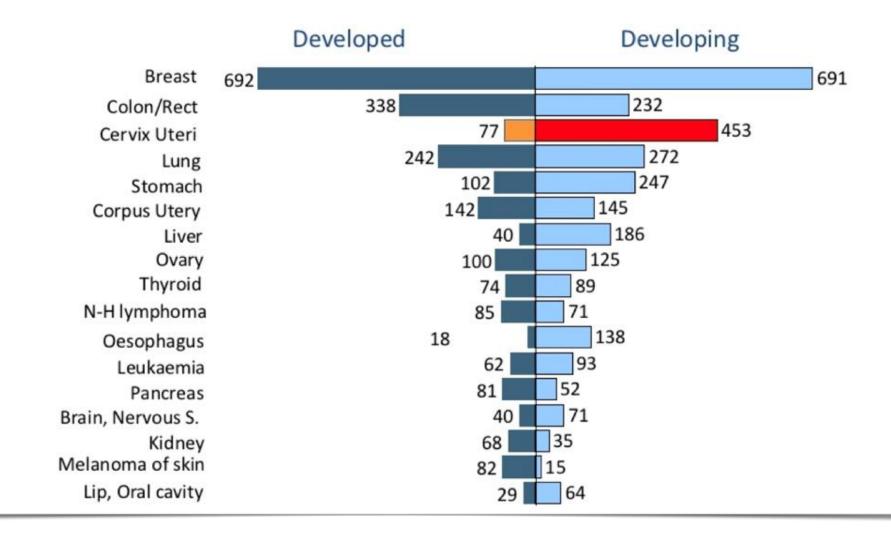
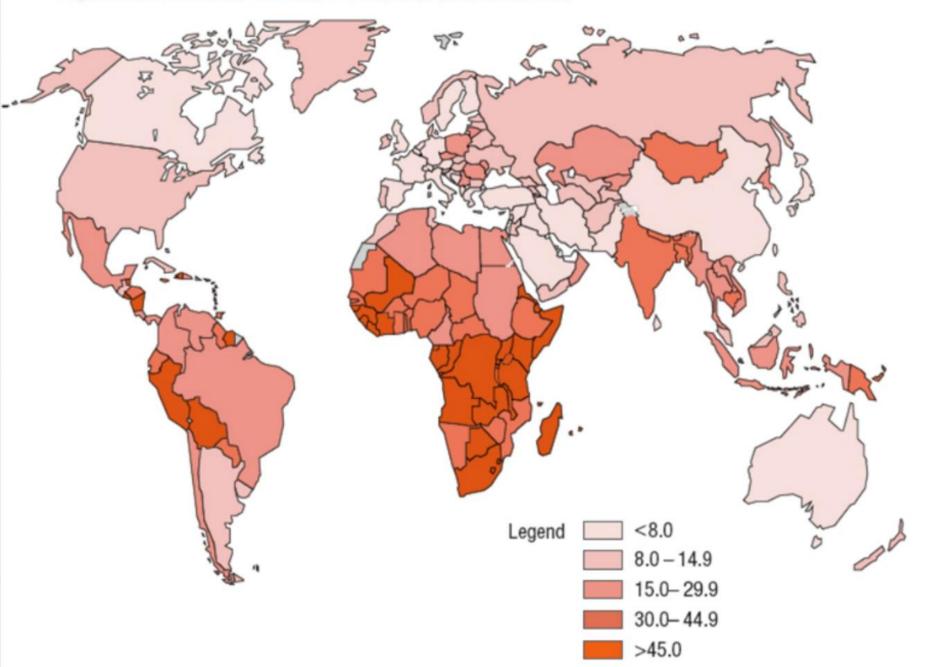
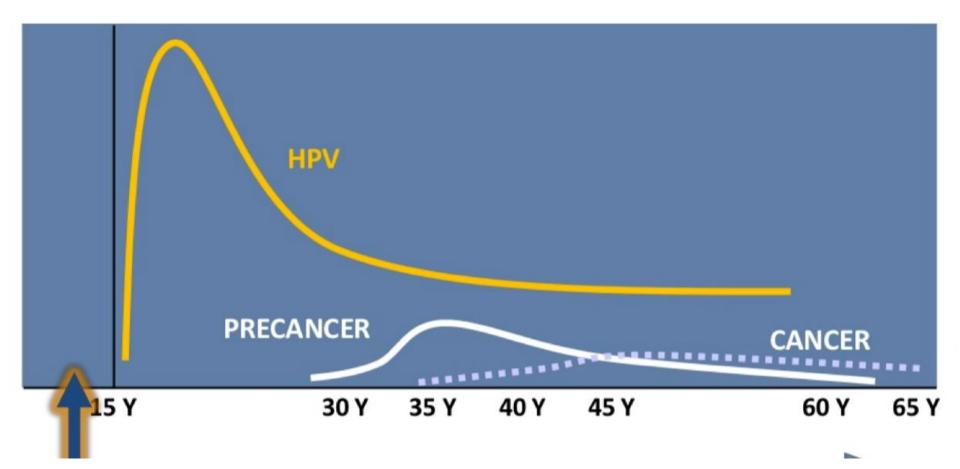


Figure 1.3 Worldwide incidence rates of cervical cancer per 100,000 females (all ages), age-standardised to the WHO standard population (2005)





Awareness of cervical cancer and pap smear consumption among women attending outpatient clinics at JUH

Have you ever done a pap smear test ?	Frequency	Percent
Yes	130	27.3%
No	346	72.7%
	476	100.0

Table 4. Cervical cancer risk factors recognition level

	How much do	you agree that the	following can be	a risk factor for o	cervical cance
Risk Factor	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
	<u>N(</u> %)		111,707		<u>N(</u> %)
HPV	24 (4.9%)	125 (25.8%)	278 (57.3%)	42(25.8%)	16(3.3%)
Smoking	59 (12.2%)	207 (42.8%)	156 (32.2%)	43(8.9%)	19(3.9%)
Low immunity	40 (8.2%)	250(51.5%)	148(30.5%)	29(6%)	18(3.7%)
Oral contraceptive	25 (5.2%)	151(31.2%)	223(46.1%)	61(12.6%)	24(5%)
Chlamydia infection	39 (8%)	215 (44.3%)	184(37.9%)	28(5.8%)	19(3.9%)
Early marriage	18 (3.7%)	84(17.3%)	251(51.8%)	91(18.8%)	41(8.5%)
Multiple pregnancy	20 (2.1%)	86 (17.7%)	208 (42.9%)	126(26%)	45(9.3%)
Irregular Pap smear testing	76 (15.7%)	188 (38.8%)	153(31.5%)	41 (8.5%)	27(5.6%)

Table 4. Cervical cancer risk factors recognition level

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Risk Factor	Strongly	Agree	Neutral	Disagree	Strongly
	agree	<u>N(%)</u>	<u>N(%)</u>	<u>N(</u> %)	disagree
	<u>N(</u> %)		111, (0)		<u>N(</u> %)
HPV	<mark>24 (4.9%)</mark>	<mark>125 (25.8%)</mark>	<mark>278 (57.3%)</mark>	42(25.8%)	<mark>16(3.3%)</mark>
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Characteri	stics	N (%)	
Age (mean	$1 \pm SD$)	34.8 ± 1.02	
Range		16 - 70	
Educationa	al level		
- Un	educated	1 (0.2%)	
- Priz	mary School	23 (4.8%)	
- Sec	condary School	120 (24%)	
- Dip	oloma/Bachelor's	303(60.6%)	
- Ma	ster's	32 (6.4%)	
Marital sta	t 10		_
	Married	456 (01 29/)	
	Divorced	456 (91.2%) 18 (3.6%)	
	Widowed	9 (1.8%)	
-	WILlowell	9 (1.070)	
Income			\neg
-	<500 JD	198 (39.6%)	
-	500-1000 JD	224 (44.8%)	
-	1000-5000 JD	29 (5.8%)	
-	>5000 JD	4 (0.8%)	

Table 1. Scio-demographic characteristics of the study sample

Employment		
- Unemployed		231 (42.6%)
- Full time		174 (34.8%)
- Part time		19 (3.8%)
- Retired		31 (6.2%)
- Still studying		16 (3.2%)
 Private busines 	6	18 (3.6%)
- Cant work (Dis	sabled)	7 (1.4%)
Cancer Experience		
- Close Relatives	yes	28 (5.61%)
	no	459(91.8%)
- Other Relatives	yes	124 (24.8%)
	no	364 (72.8%)
- Close Friends	yes	79(15.8%)
	no	410 (82%)
- Other Friends	yes	41(8.2%)
	no	448 (89.6%)
- Sample women	yes	53(10.6%)
	no	437(87.4%)
GP		
- Yes		164 (32.8%)
- No		316(63.2%)

Table 6. Awareness level for warning signs and risk factors according to blooms method

- -

-

Variable	Awareness level
Warning signs	Low 61.7%
	Medium 30.6%
	<u>high</u> 7.6%
Risk factors	Low 72.4%
	Medium 20.6%
	High 7.4%
	· · · · · · · · · · · · · · · · · · ·

Low rate of cervical cancer among women with rising incidence of cervical cytological abnormalities. The unlearnt lesson

Mazen A Freij¹, <u>Maysa M Khadra¹</u>, <u>Husam A Abu Farsakh²</u>, <u>Hanan H Saleh³</u>, <u>Altaf A Ijmail²</u>, <u>Bushra O Rahal¹</u>, <u>Manar H Waldali⁴</u>, <u>Nisreen S. Najeeb⁵, Lubna H. Tahtamouni^{5,*}</u>

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Table 1. Distribution of cervical Pap smear results during three 5-year periods between2000-2014, n (%).

Cytological smear result	Total	Period 1	Period 2	Period 3
	2000-2014	2000-2004	2005-2009	2010-2014
Normal	4,825	563	2,341	1,921
	(85.5)	(93.8) a3,b3	(87.9) ^{c3}	(80.6)
ASCUS	204	4	98	102
	(3.6)	(0.6) a3,b3	(3.7)	(4.2)
AGUS	90	11	29	50
	(1.6)	(1.8)	(1.1) °2	(2.1)
LSIL	463	16	153	294
	(8.2)	(2.7) <u>a3,b3</u>	(5.7) ^{c3}	(12.3)
HSIL	42	4	30	8
	(0.7)	(0.7)	(1.1) °2	(0.3)
Carcinoma	2	0	0	2
	(0.04)	(0.0)	(0.0)	(0.1)
Others	19	2	12	5
	(0.3)	(0.3)	(0.5)	(0.2)
Total	5,645	600	2,663	2,282

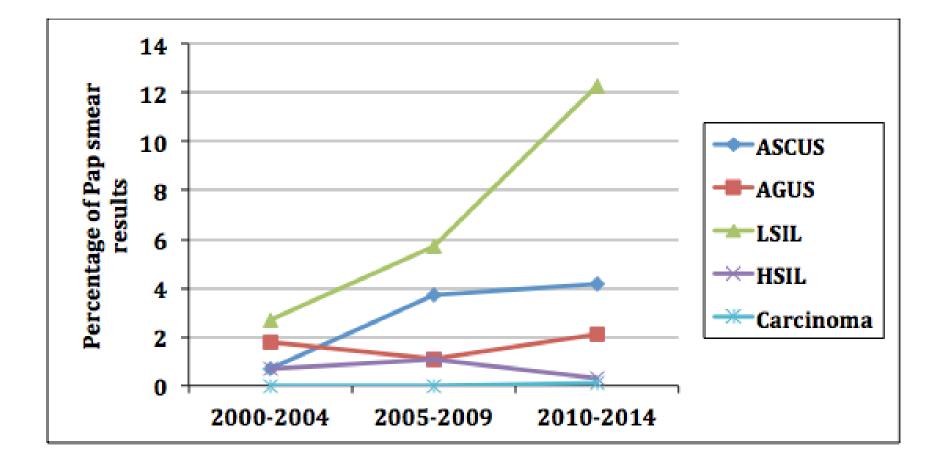


Figure 1. Trends in cervical cytological abnormalities in Jordan between 2000-2014. n=5,645.

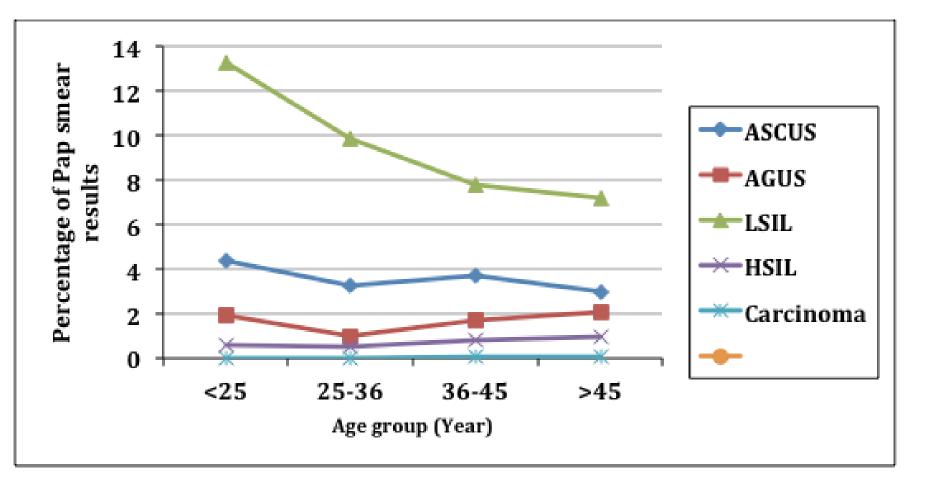


Figure 2. Trends in cervical cytological abnormalities in Jordan by age group, n=4,666.

Cytological smear	Total	< 25 years	25-35 years	36-45 years	>45 years
result					
Normal	3,994	126	912	1,389	1,567
	(85.6)	(79.9) <u>a,b</u>	(85.2)	(85.8)	(86.2)
ASCUS	157	7	35	60	55
	(3.4)	(4.4)	(3.3)	(3.7)	(3.0)
AGUS	79	3	11	27	38
	(1.7)	(1.9)	(1.Q)°	(1.7)	(2.1)
LSIL	383	21	106	126	130
	(8.2)	(13.3) ^{a,b2}	(9.9) ^{c2}	(7.7)	(7.2)
HSIL	35	1	5	11	18
	(0.8)	(0.6)	(0.5)	(0.8)	(1.0)
Carcinoma	2	0	0	1	1
	(0.04)	(0.0)	(0.0)	(0.06)	(0.05)
Others	16	0	2	5	9
	(0.3)	(0.0)	(0.2)	(0.3)	(0.5)
Total	4,666	158	1,071	1,619	1,818

Table 2. Age specific cervical cytological abnormalities, n (%).

Type Specific Prevalence of Human Papillomavirus Among Women with Abnormal Cytology in Jordan

Mazen A Freij 1*, Hanan H Saleh 2 Husam A Abu Farsakh 3 Maysa M Khadra 1,

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 DNA was extracted and the HPV screening kit (GenID GmbH) was used on cervical swabs for HPV differentiation into low-risk (LR) and high-risk (HR) types.

The assay reportedly enables detection of 24 HPV types: 6 low-risk (LR HPV 6, 11, 40, 42, 43, 44) and 18 high-risk (HR HPV 16, 18, 31, 33, 34, 35, 39, 45, 51, 52, 53, 56, 58, 59, 66, 68, 73 a 82) types



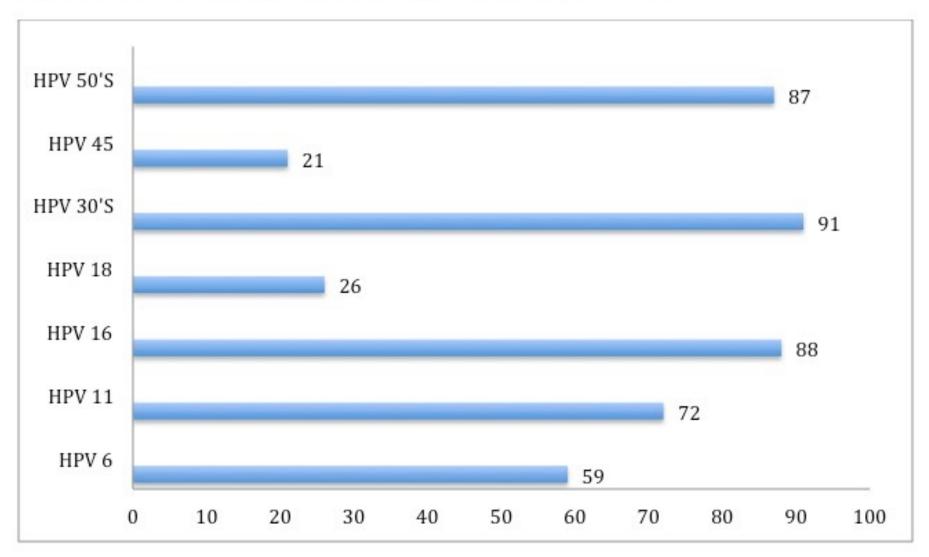
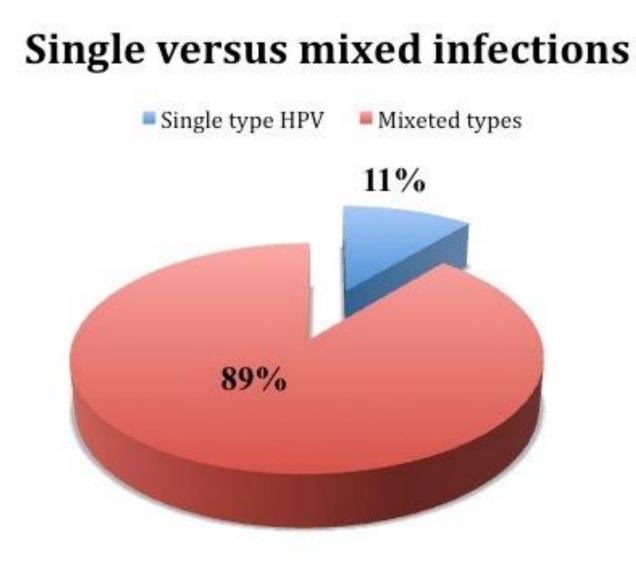


Table 1 Results of HPV testing in women with abnormal cytology

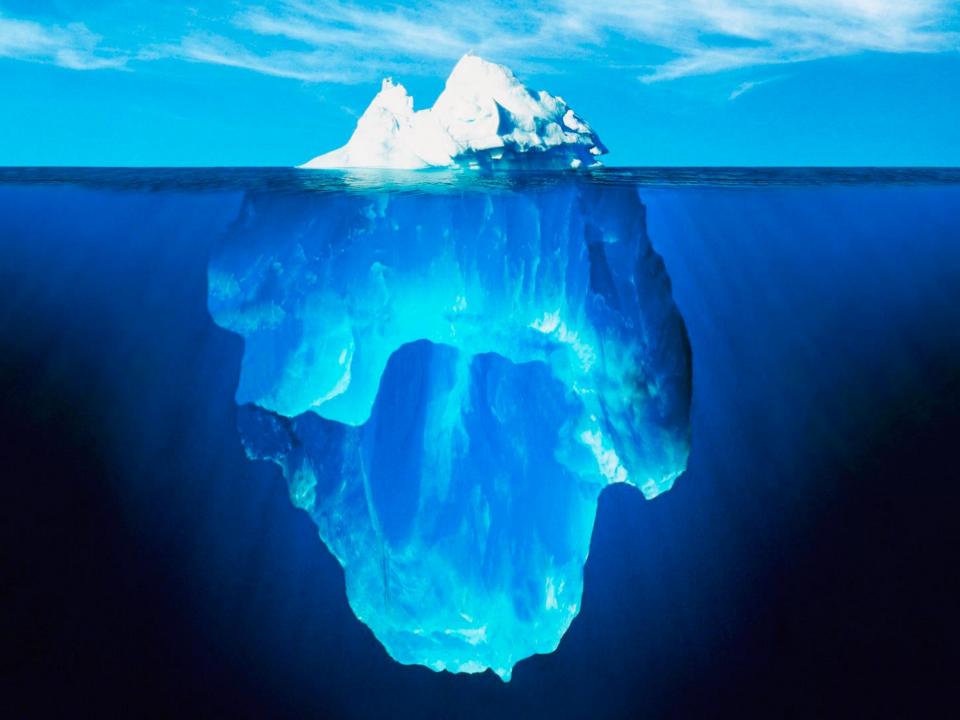
Group	N (%)
Total Number of Samples	209
HPV negative	56 (26.8%)
HPV positive	153 (73.2%)
Infection with a single HPV genotype	23 (11%)
Co-infection with multiple HPV genotypes	186 (89%)

re 3 Incidence of co-infection with multiple genotypes and single genotype infection.



NATIONAL INSTITUTE FOR HEALTH AND CLINICAL EXCELLENCE Diagnostics consultation document Adjunctive colposcopy technologies for examination of the uterine cervix – DySIS and the Niris Imaging

System



Founta et al (ASCCP 2014, posters 15 & 16)

Teaching hospital (QEH, UK) performance audit - Low Grades

Low-Grade smear referrals: DySIS is more sensitive than conventional colposcopy in identifying CIN2+ lesions

Sensitivity to predict CIN2+ in Women with Low-Grade pap 76 patients (*on going*)

81% DySIS colposcopy	
Conventional 13 %	

Founta et al (ASCCP 2014, posters 15 & 16)

Teaching hospital (QEH, UK) performance audit Test of Cure

Positive Test-Of-Cure referrals (post-LEEP Neg smear, HPV+): DySIS is significantly more sensitive than conventional colposcopy in detecting CIN2+ lesions

Sensitivity to predict CIN2+ in positive Test-Of-Cure women 68 patients (*on going*)





Elite Mom's

ما هي خارطة DySIS ؟ خارطة DySIS الفريدة من نوعها، ذات براءة الاختراع المسجلة ، هي مسح رقمى لخلايا عنق الرحم بعد مسحها بحمض الاسيتيك حيث تظهر الخلايا غير الطبيعية بألوان متعددة لتسهيل القراءة

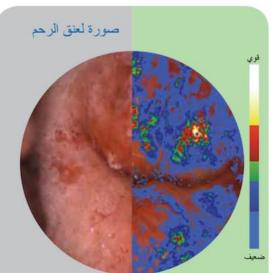
كيف تساعدنا خارطة DySIS ؟

تبرز خارطة DySIS أكثر مناطق عنق الرحم تأثرا بحمض الأسيتيك مما يساعد الطبيب على اختيار المناطق الأمثل لأخذ الخزعات

ما هي الخزعة ؟

عند ظهور منطقة غير طبيعية في التنظير يقوم الطبيب بأخذ خزعة صغيرة من هذه المنطقة لرؤية أي تغير ات في الخلايا ، و تعرف التغيرات غير الطبيعية في الخلايا ب (ورم غشاء عنق الرحم) و الذي يعالج بنجاح في 100% من الحالات

عنق الرحم



خارطة DySIS

تنظير عنق الرحم التقليدي الألوان الأحمر ، الأصفر و الأبيض تدل على المناطق الاكثر تأثرا بحمض الأسيتيك مما يساعد الطبيب على اختيار المنطقة الأمثل لأخذ العينة

ما هي مميز ات تنظير عنق الرحم باستخدام DySIS ؟

اللون الأبيض يدل على المناطق الاكثر تأثرا بحمض الأسيتيك

نظام تصوير عنق الرحم المتطور DySIS يقيس بموضوعية عملية التنظير ويتم تلخيص نتائج التنظير بواسطة خارطة DySIS المتقدمة



على ماذا تدل النتيجة غير الطبيعية لتنظير عنق الرحم ؟

ظهور نتائج غير طبيعية هو أمر ليس بغريب ، اذ يظهر في 5% من الحالات . حيث ان النتيجة غير الطبيعية تعنى ان هنالك تغير ات صغيرة في عنق الرحم و تعتبر هذه التغييرات أولى المؤشرات على احتمالية حدوث سرطان عنق الرحم في المستقبل

ما هو تنظير عنق الرحم ؟

هى عملية يتم فيها استخدام منظار خاص لرؤية عنق الرحم حيث يقوم الطبيب بإضافة حمض الأسيتيك لخلايا عنق الرحم حيث تظهر الخلايا غير الطبيعية باللون الأبيض

- Dysis was introduced in June 2015.
- First 66 cases were audited

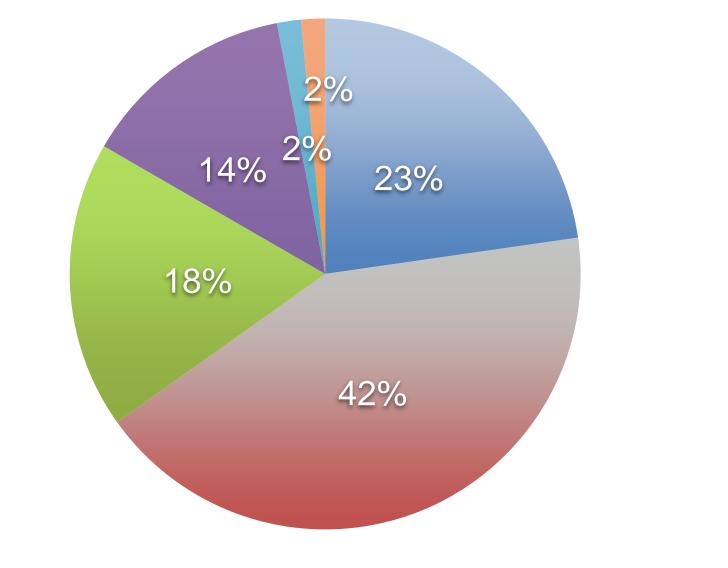
Indications

- Abnormal looking cervix 12%
- Abnormal cytology 32%
- Multiple inadequate smears 7%
- Positive for HR HPV 44%
- Mixed 5%

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- Abnormal looking cervix 12%
- Abnormal cytology 32%
- Multiple inadequate smears 7%
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- Mixed 5%

Outcome



No biopsy CIN I or less CIN II CIN III VAIN VIN

 60% of CIN 2 + presented with low grade / Negative smear or positive HR HPV

Efficacy of HPV-based screening for prevention of invasive cervical cancer: follow-up of four European randomised controlled trials

Dr Guglielmo Ronco, MD 🖾 🖂, Prof Joakim Dillner, MD, K Miriam Elfström, MPH, Sara Tunesi, PhD, Prof Peter J F Snijders, PhD, Marc Arbyn, MD, Prof Henry Kitchener, MD, Nereo Segnan, MD, Clare Gilham, MSc, Paolo Giorgi-Rossi, PhD, Johannes Berkhof, PhD, Prof Julian Peto, DSc, Prof Chris J L M Meijer, MD, the International HPV screening working group[†]

[†] For members see end of report Published Online: 03 November 2013

Interpretation

HPV-based screening provides 60–70% greater protection against invasive cervical carcinomas compared with cytology. Data of large-scale randomised trials support initiation of HPV-based screening from age 30 years and extension of screening intervals to at least 5 years.

What about Jordan ?

Limitation for HPV testing

Cost

Social Stigma

CONCLUSIONS

• There is no scientific doubt that HPV testing should be used as a primary screening test.

 Collaboration between private and public institutions to implement a cervical screening program in Jordan.





Thank You