Procédures cliniques en radio-oncologie: sites gynécologiques

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Plan

- Quelques généralités
- Les cancers de l'endomètre
- Les cancers du col
- Les cancers de l'ovaire (pour votre culture médicale générale)
- Les cancers de la vulve et du vagin (qques slides)
- Toxicités de la RT
- Quelques cas cliniques
- Take home messages et questions

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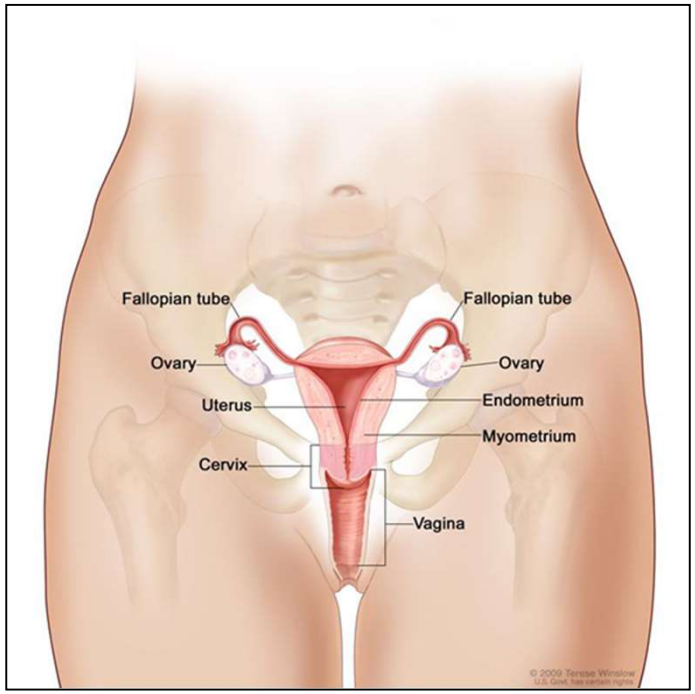
- Carcinomes du corps utérin (endomètre)
- Carcinomes du col utérin
- Carcinomes du vagin
- Carcinomes de la vulve
- Carcinomes de l'ovaire (+ des trompes et primaires du péritoine)



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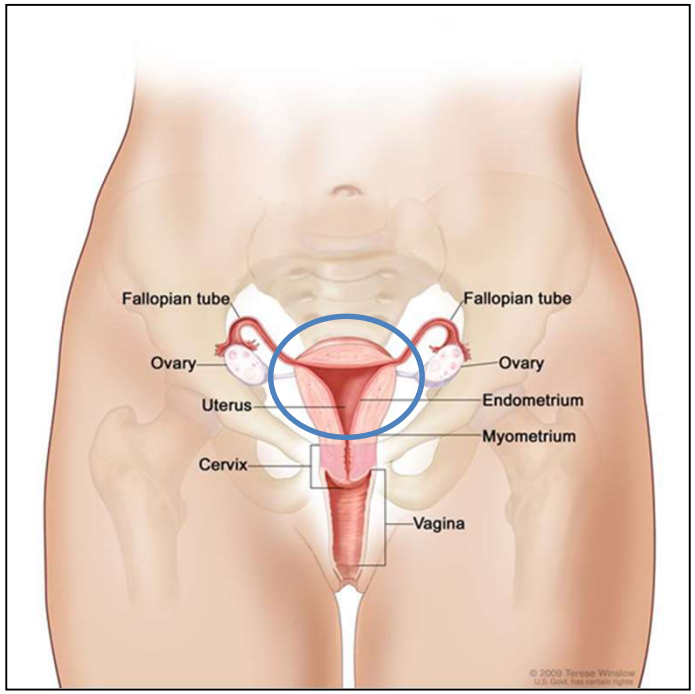

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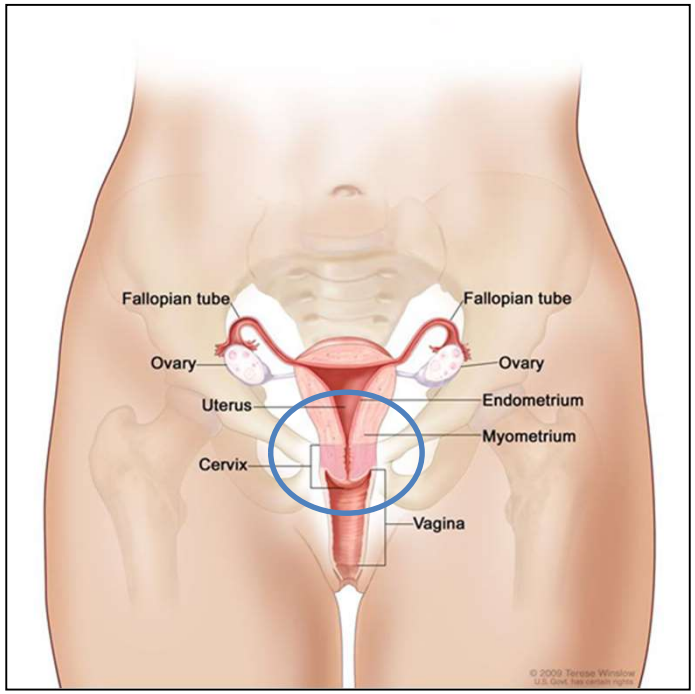

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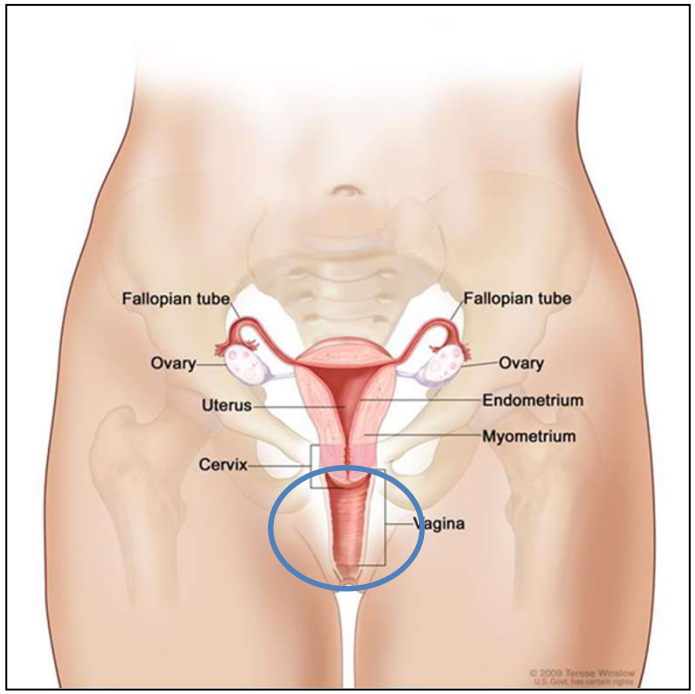

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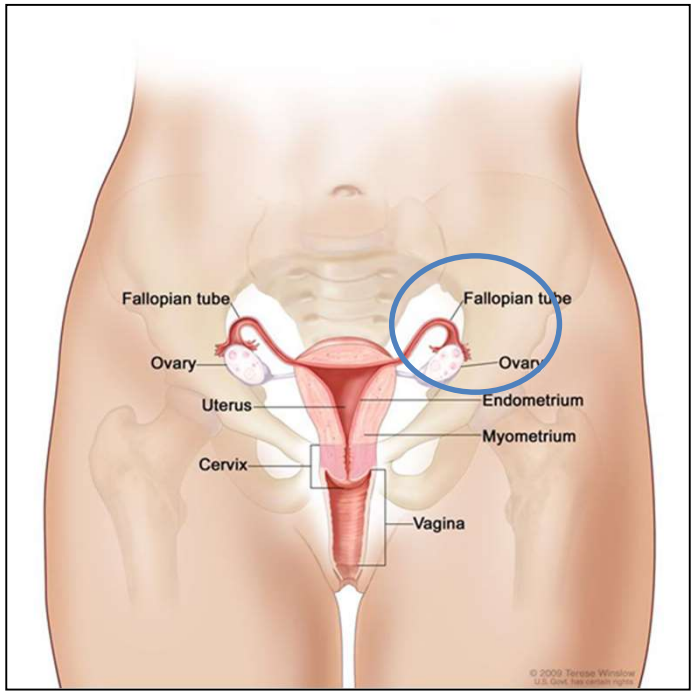

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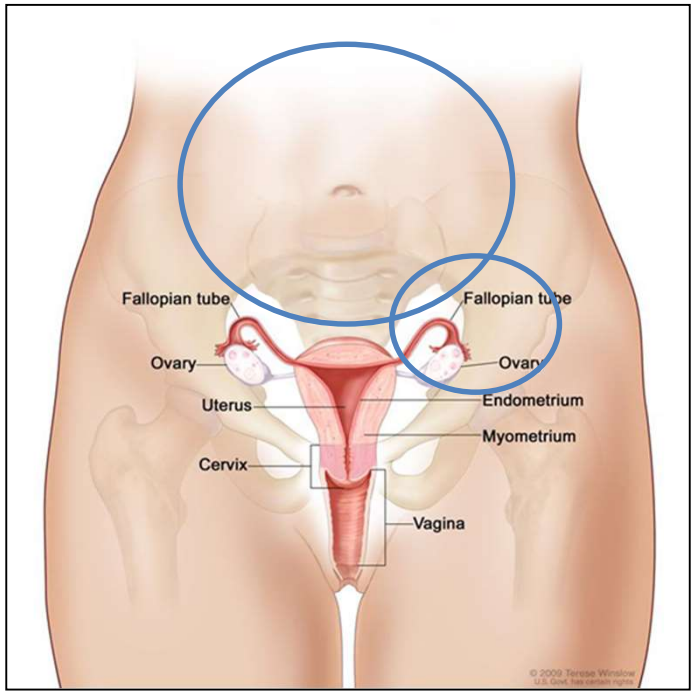

La RT dans les cancers gynéco

- Indiquée dans
  - @ 60% des patientes avec un ca du col
  - @ 45% des patientes avec un ca de l'endomètre
  - @ 35% des patientes avec un ca de la vulve
  - @ 95% des patientes avec un ca du vagin
  - @ 5% des patientes avec un ca de l'ovaire
- RT externe et curiethérapie
- Apport de l'IMRT pour réduire la toxicité

Delaney et al, Cancer 2004

Les cancers gynécoloqiques au niveau mondial

Rank	Cancer	New cases diagnosed in 2012 (1,000s)	Per cent of all cancers (excl. non-melanoma skin cancer)
1	Lung	1,825	13.0
2	Breast	1,677	11.9
3	Colorectum	1,361	9.7
4	Prostate	1,112	7.9
5	Stomach	952	6.8
6	Liver	782	5.6
7	Cervix uteri	528	3.7
8	Oesophagus	456	3.2
9	Bladder	430	3.1
10	Non-Hodgkin lymphoma	386	2.7
11	Leukaemia	352	2.5
12	Pancreas	338	2.4
12	Kidney	338	2.4
14	Corpus uteri (endometrium)	320	2.3
15	Lip, oral cavity	300	2.1
16	Thyroid	298	2.1
17	Brain, nervous system	256	1.8
18	Ovary	239	1.7
19	Melanoma of skin	232	1.6
20	Gallbladder	178	1.3
21	Larynx	157	1.1
22	Other pharynx	142	1.0
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GLOBOCAN 2012

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Environ 1 million de cas ou 8% au total

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Les cancers gynécoloqiques au niveau mondial

In 2012, the most common cancers worldwide (for both sexes) were*—

1. Lung cancer (13% of all cancers diagnosed; 1.8 million people).
2. Breast cancer (12% of all cancers diagnosed; 1.7 million people).
3. Colorectal cancer (10% of all cancers diagnosed; 1.4 million people).
4. Prostate cancer (8% of all cancers diagnosed; 1.1 million people).
5. Stomach cancer (7% of all cancers diagnosed; 952,000 people).
6. Liver cancer (6% of all cancers diagnosed; 782,000 people).
7. Cervical cancer (4% of all cancers diagnosed; 528,000 people).

In 2012, the most commonly diagnosed cancers worldwide (for males and females) were—

- Among males: Lung, prostate, colorectal, stomach, and liver.
- Among females: Breast, colorectal, lung, cervical, and stomach.

GLOBOCAN 2012

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GLOBOCAN 2012

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In 2012, the most common causes of cancer death worldwide (for males and females) were—

- Among males: Lung, liver, stomach, colorectal, and prostate.
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GLOBOCAN 2012

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In 2012, the most common causes of cancer death worldwide (for males and females) were—

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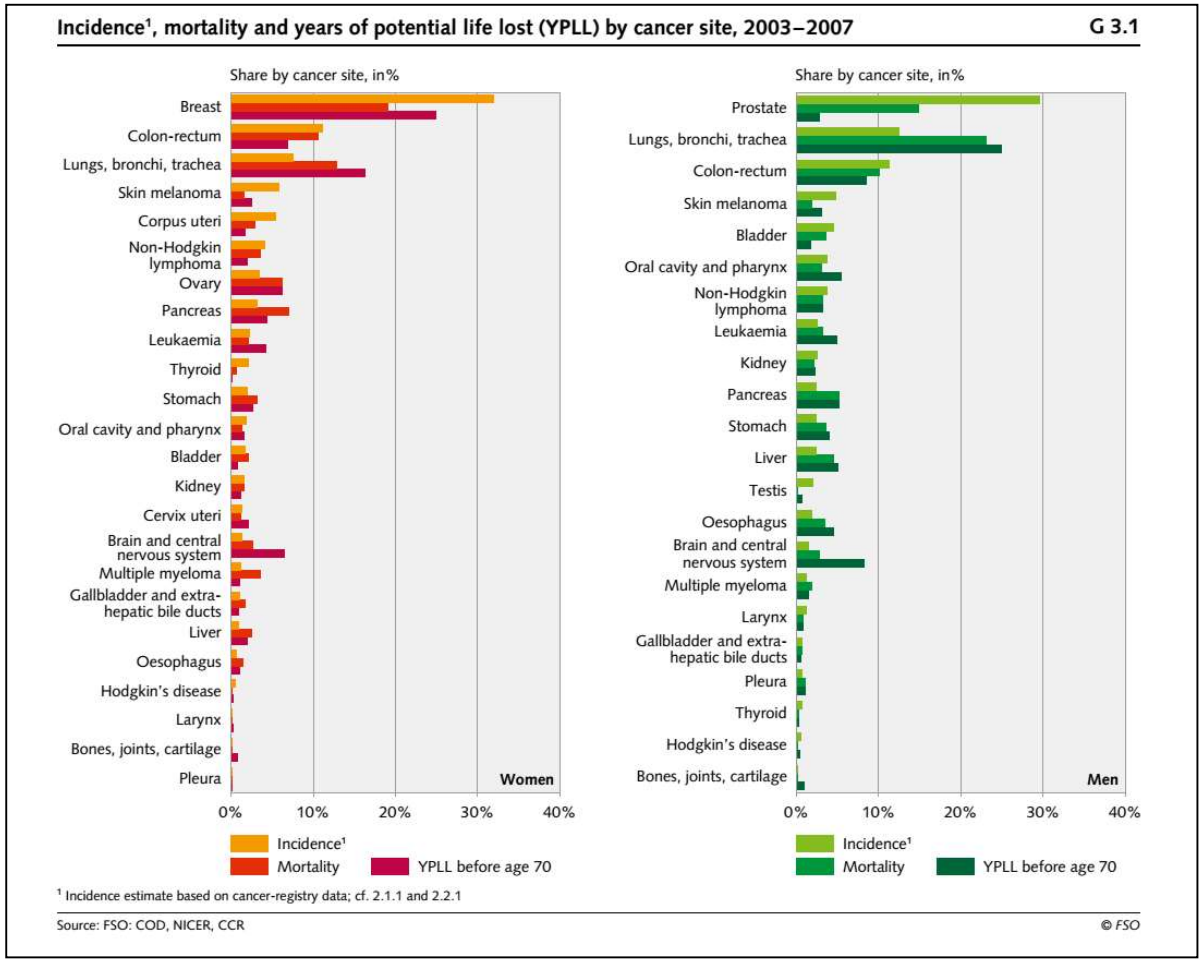
- Among females: Breast, lung, colorectal, cervical, and stomach.

GLOBOCAN 2012

En Suisse: incidence



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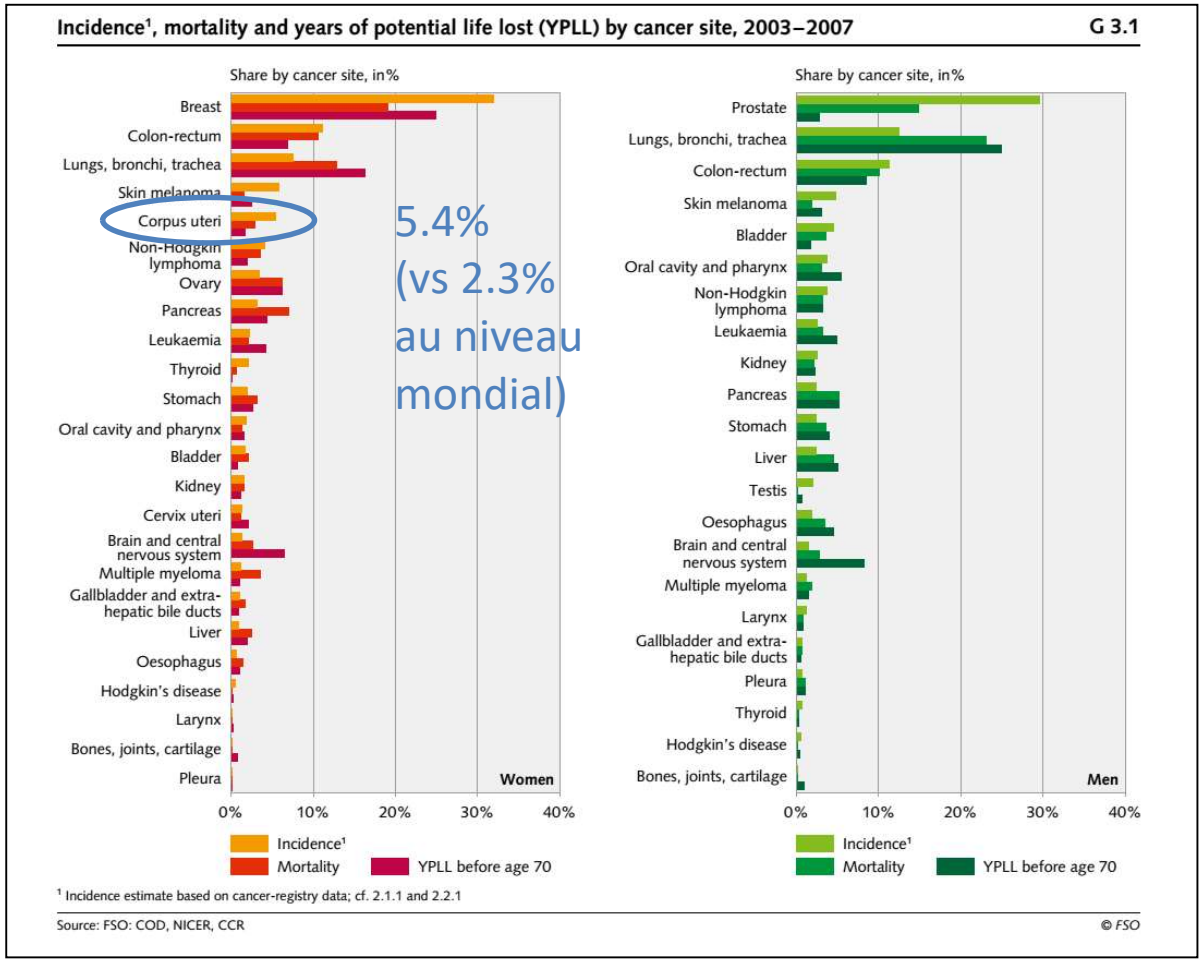

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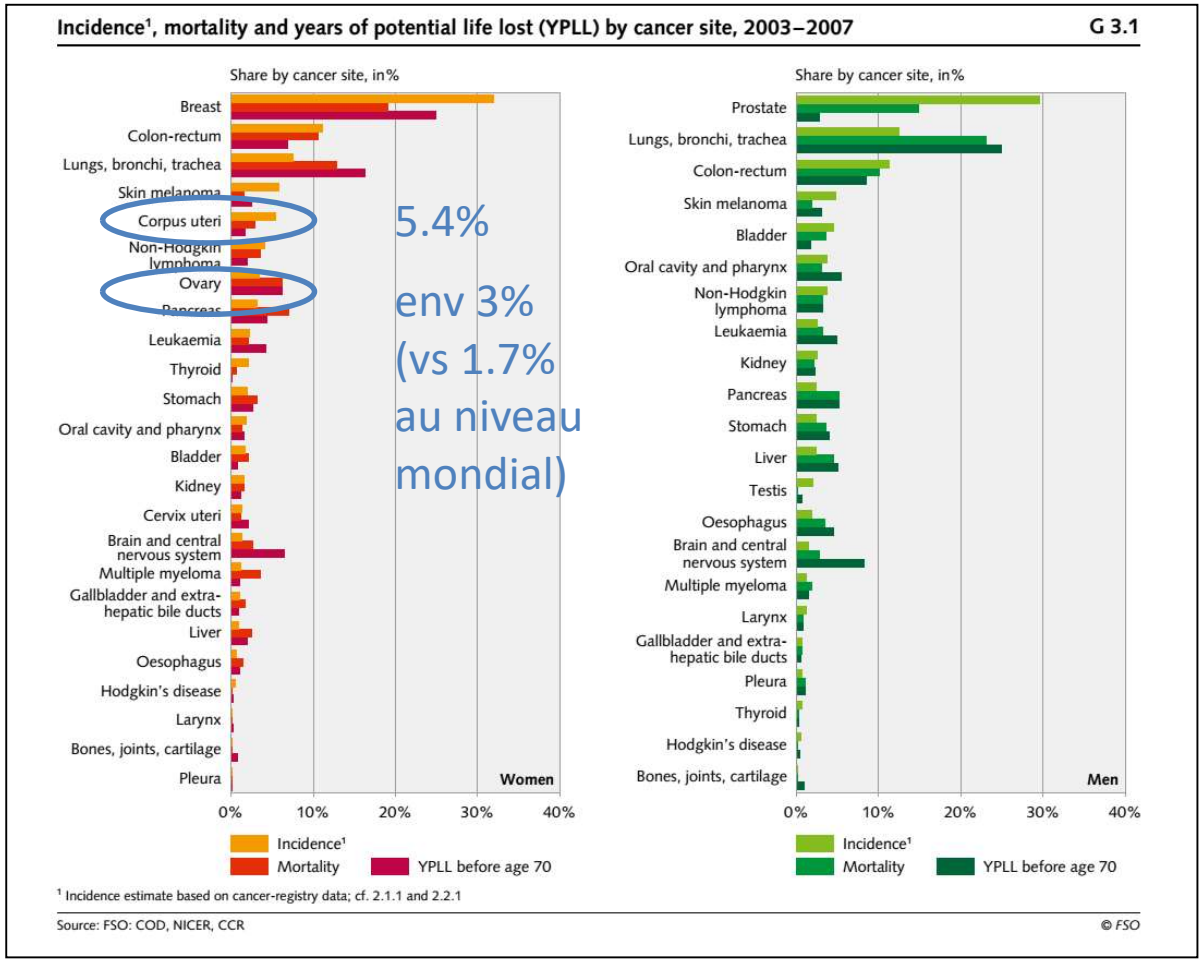

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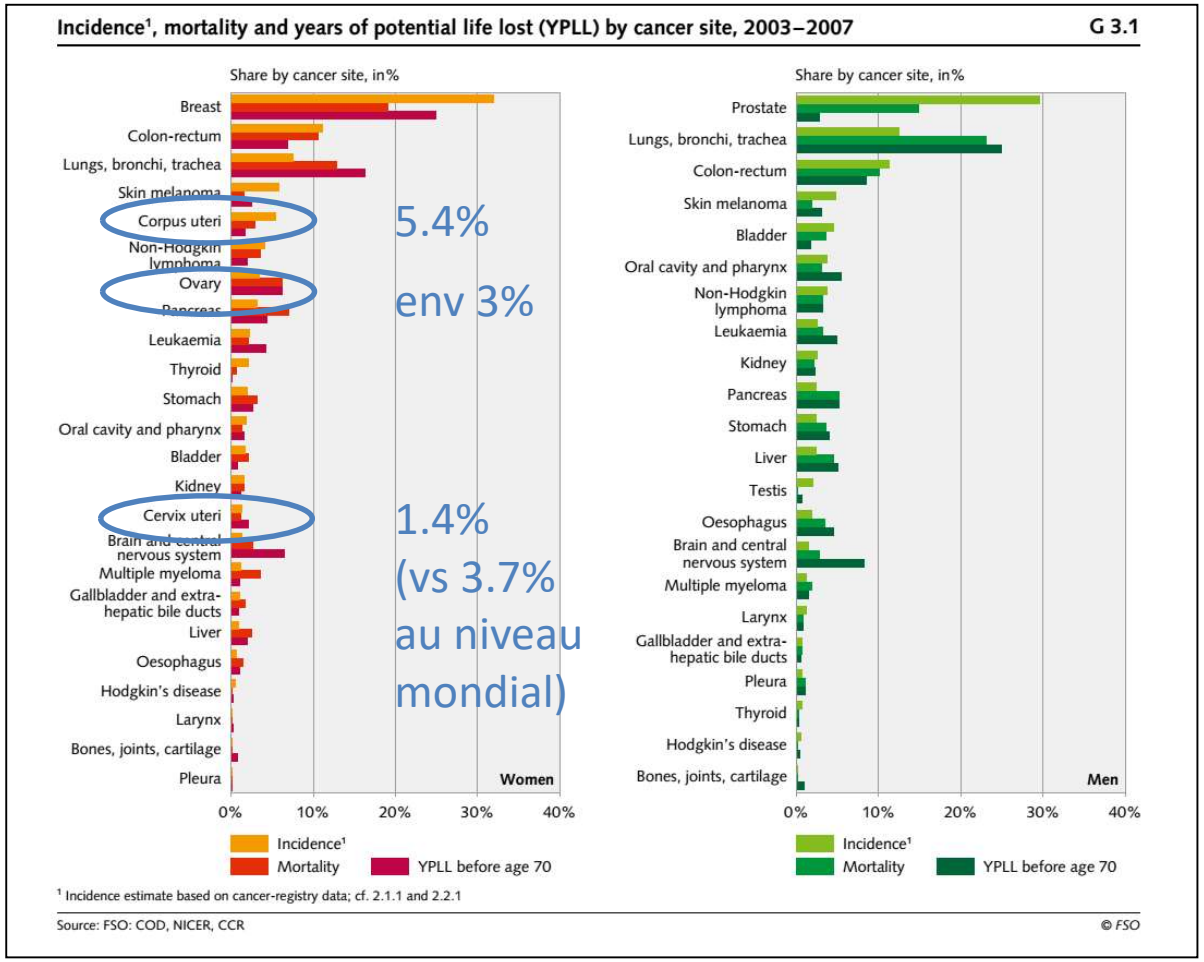

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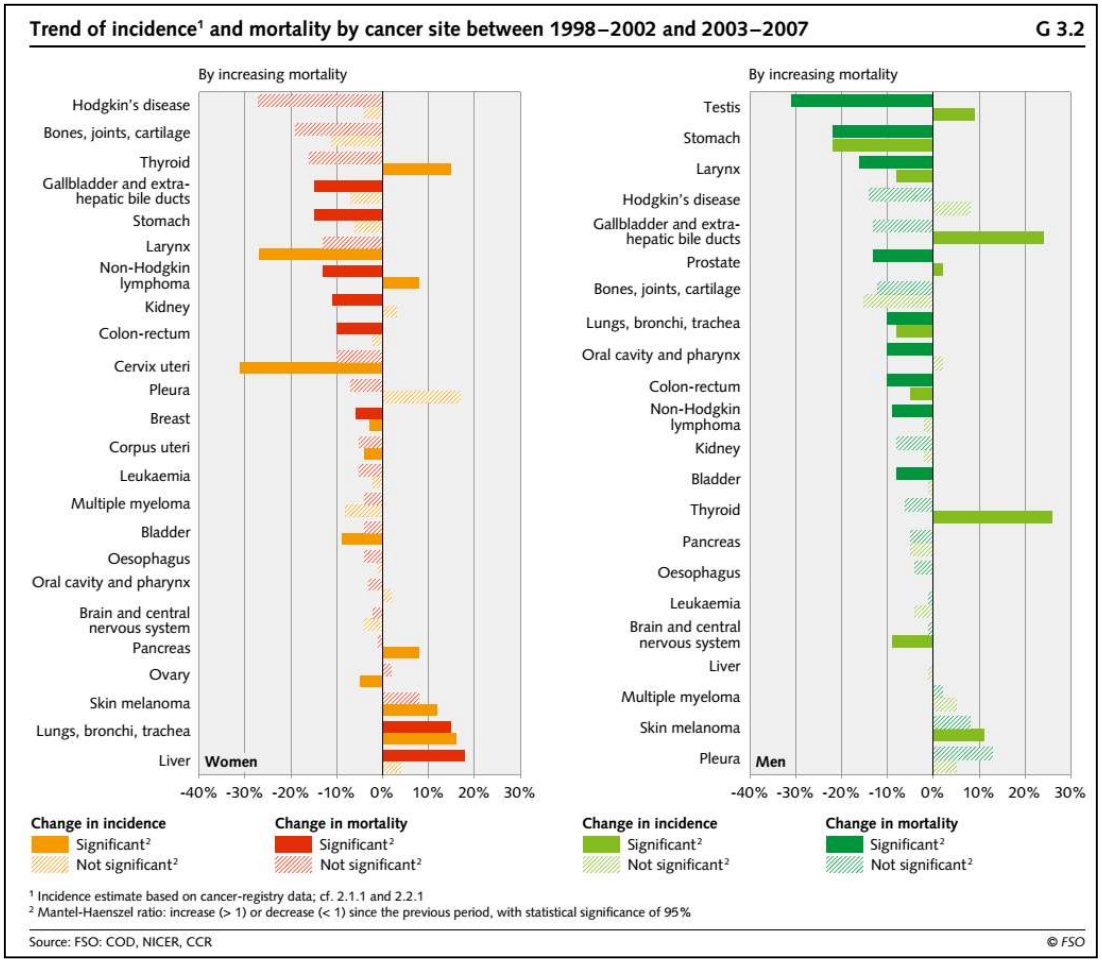

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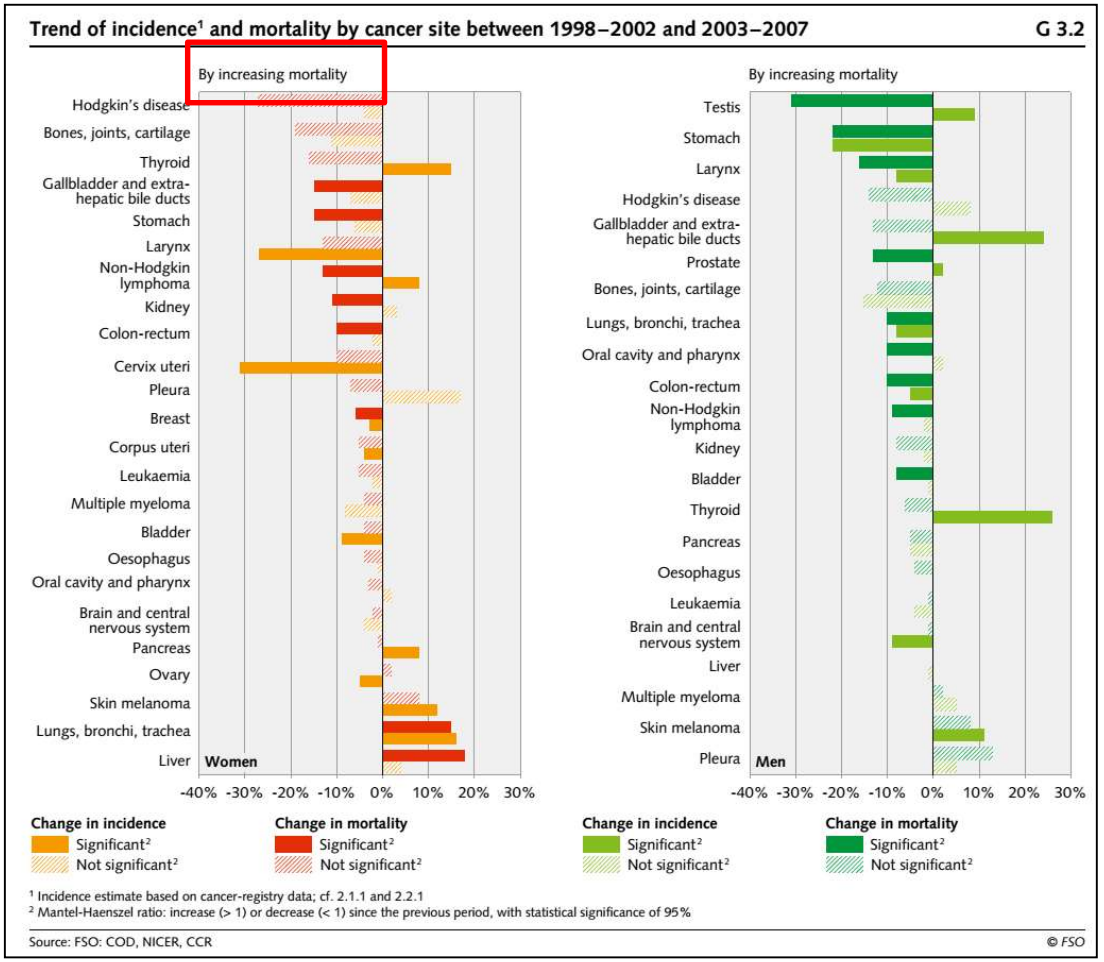

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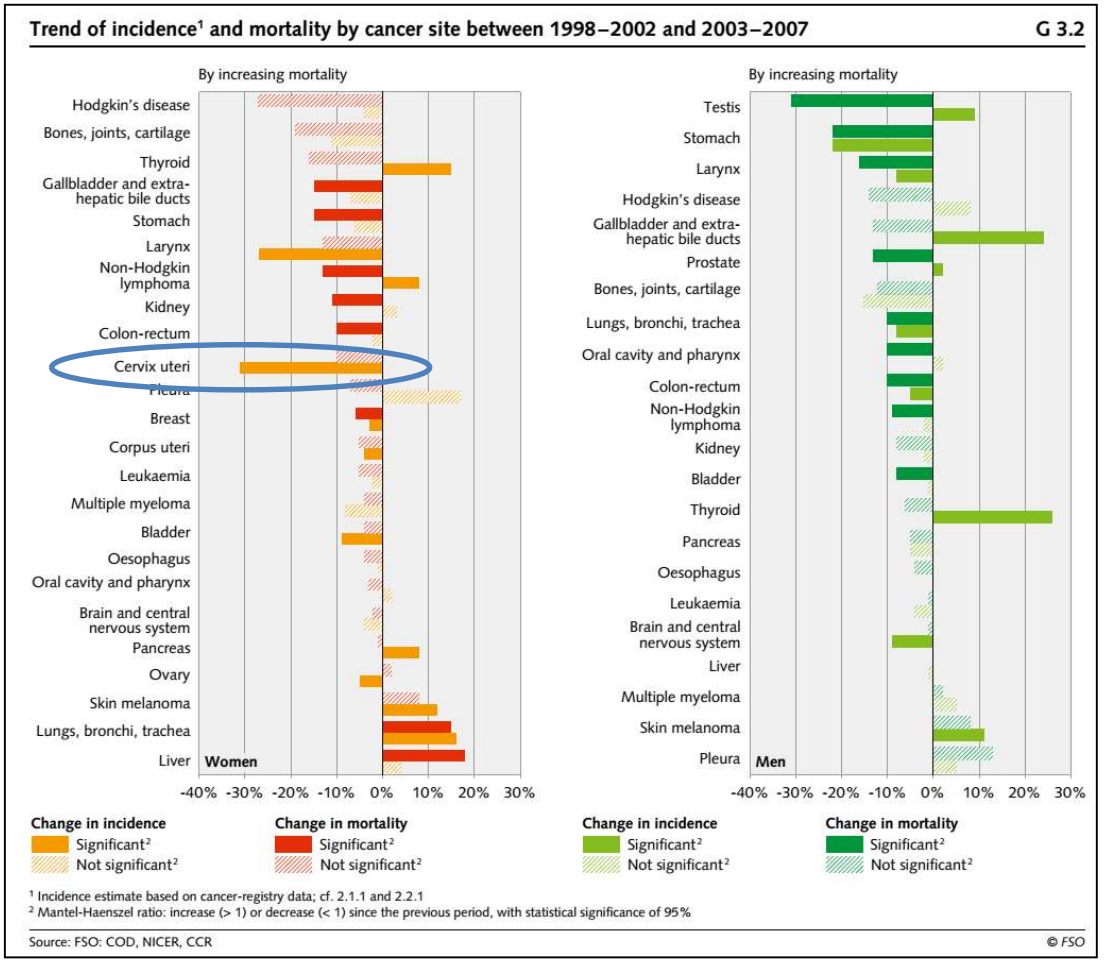

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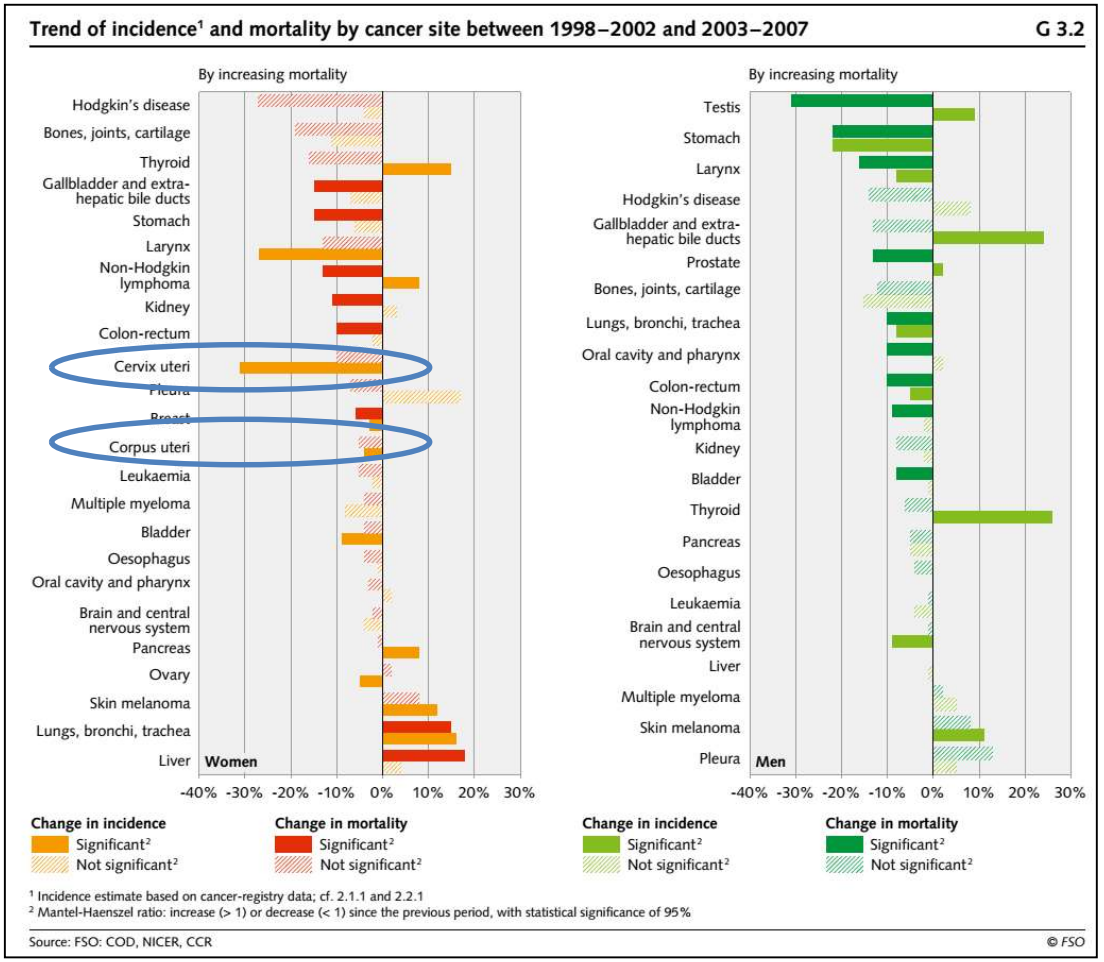

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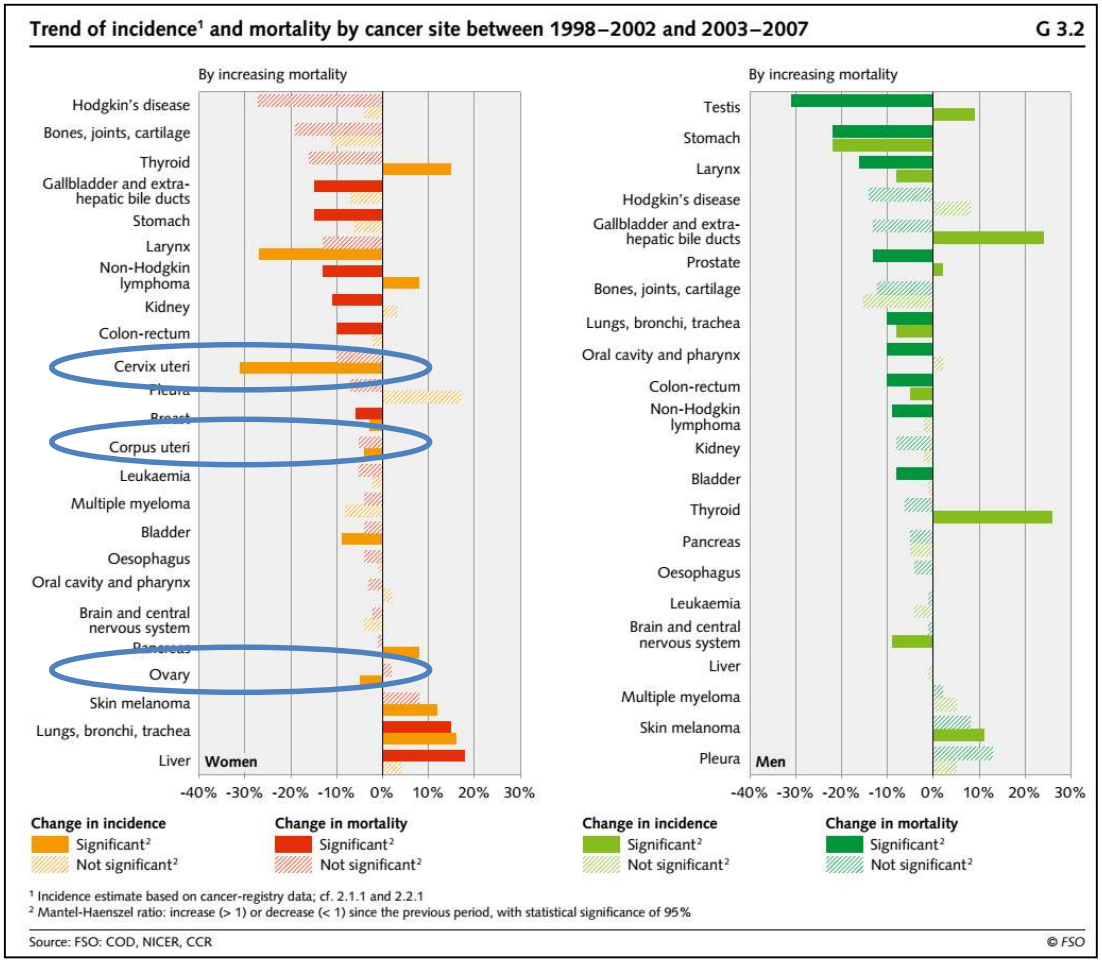

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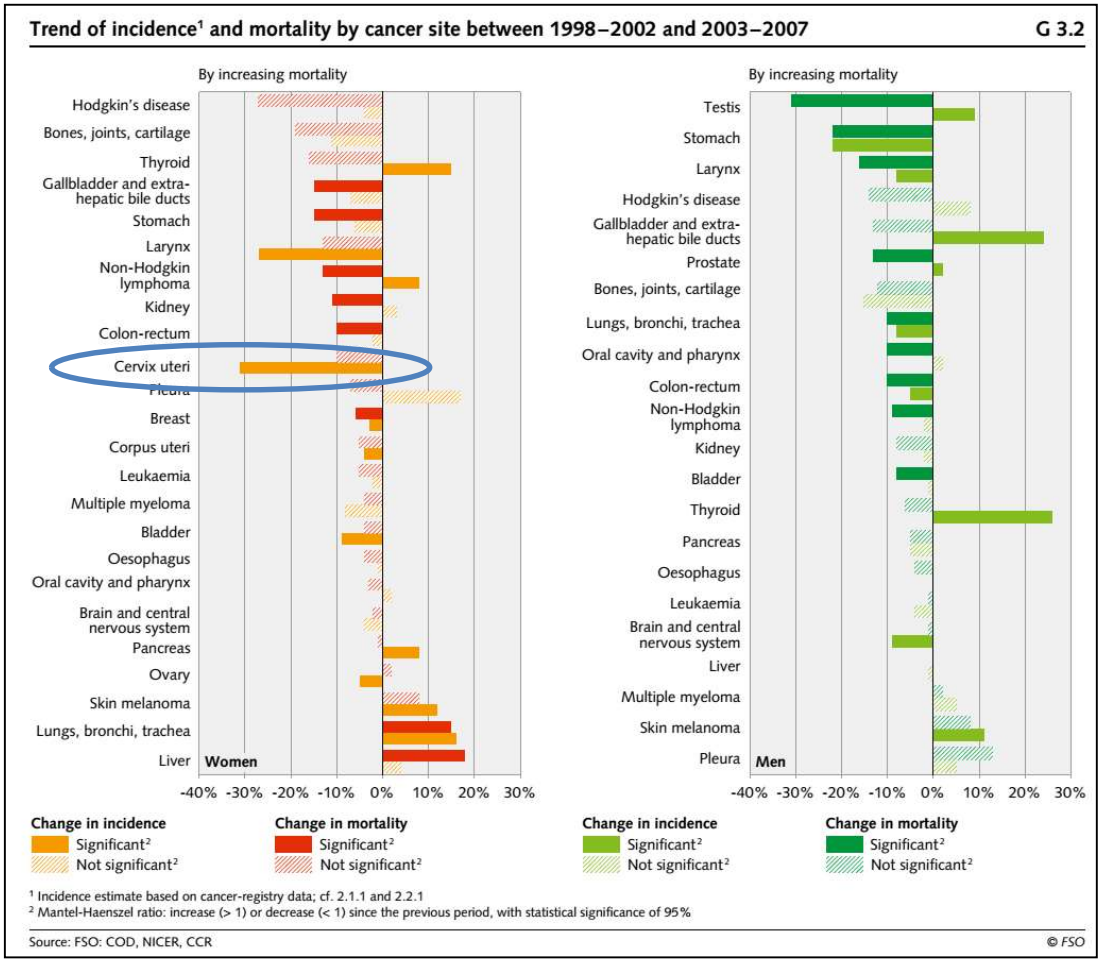
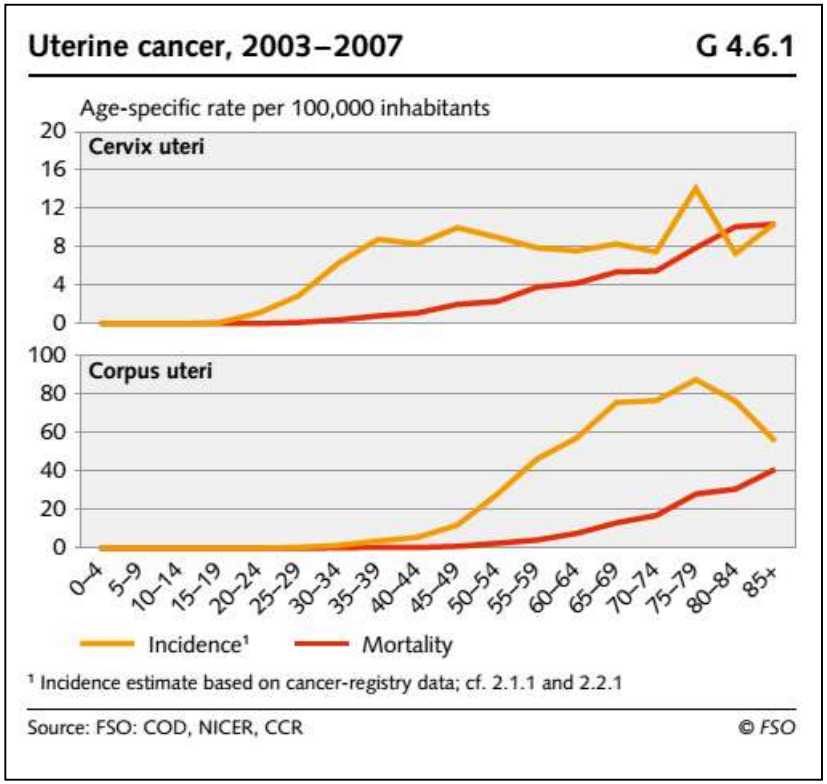
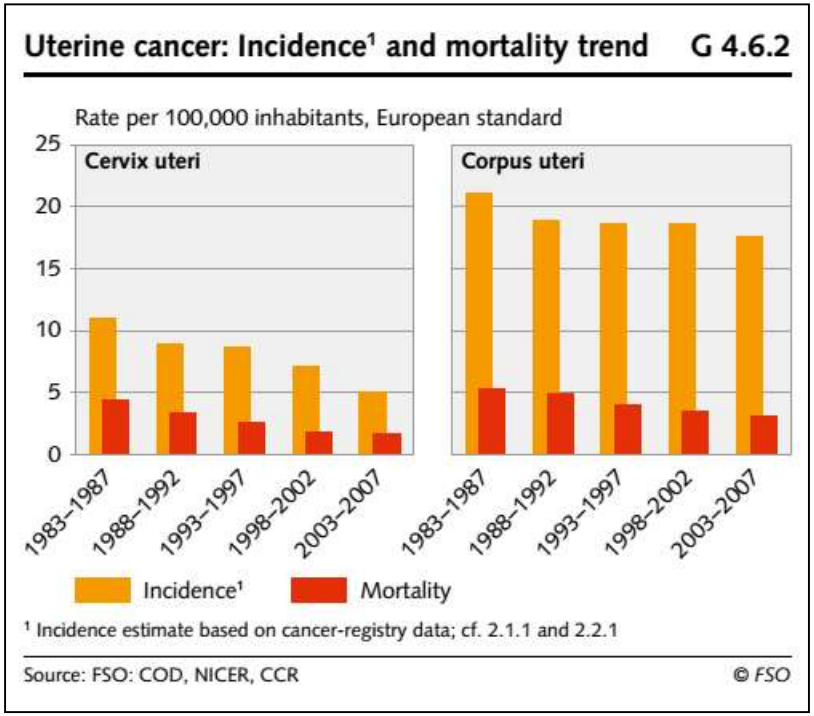


Suisse: les cancers utérins





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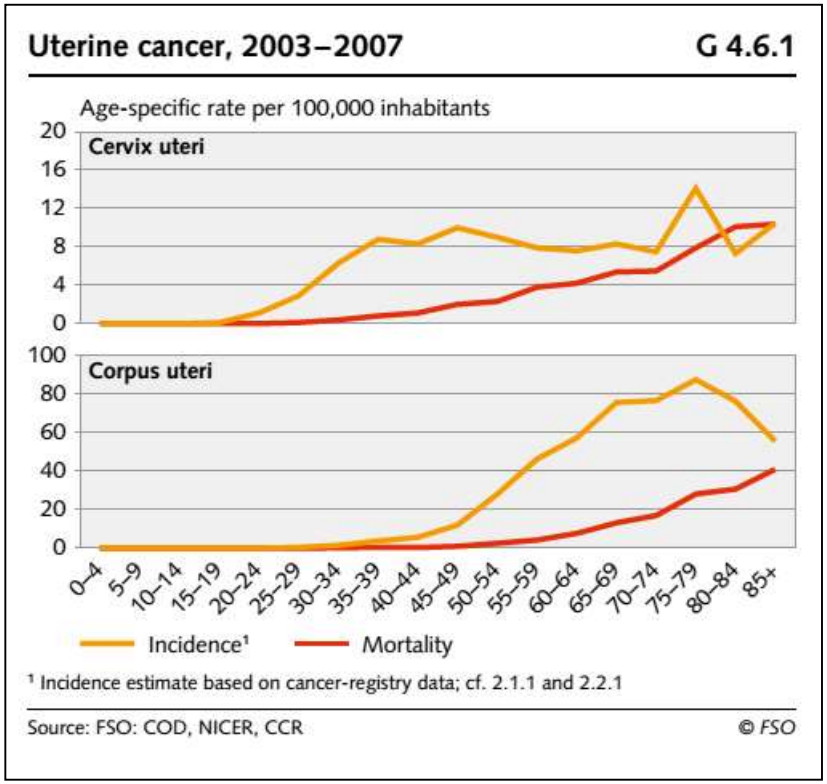

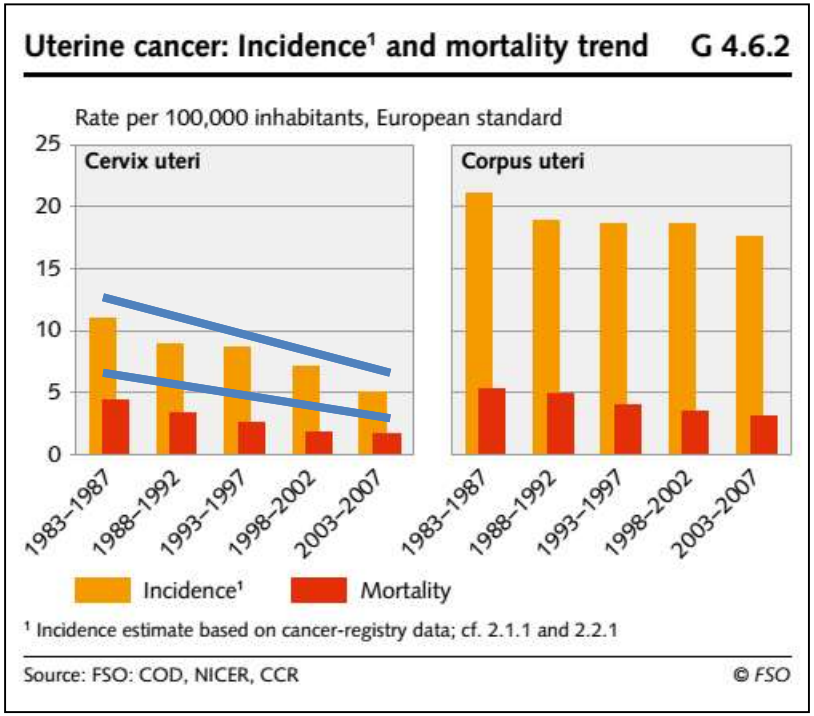

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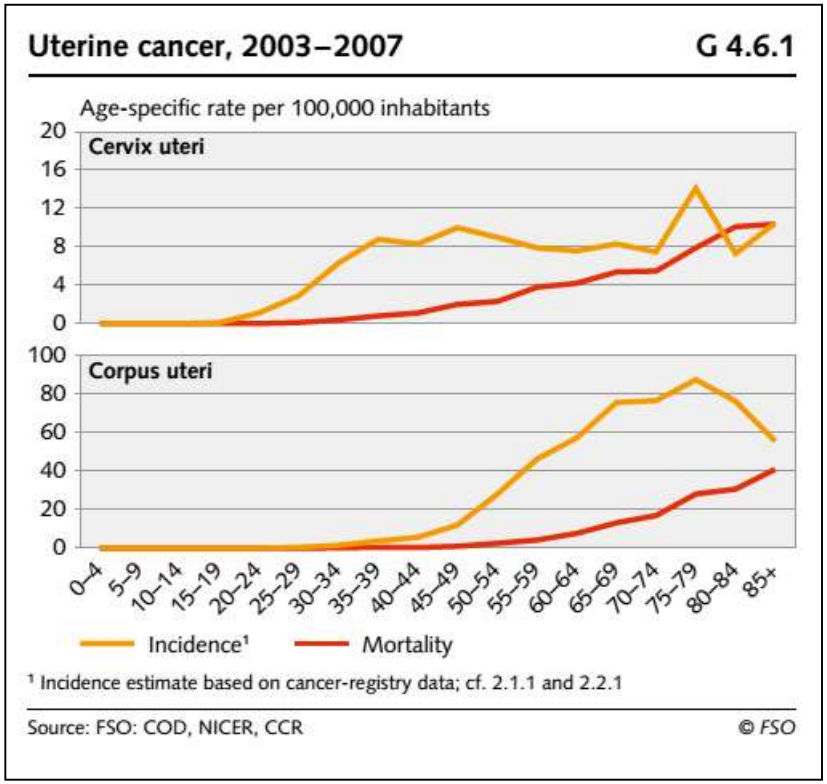
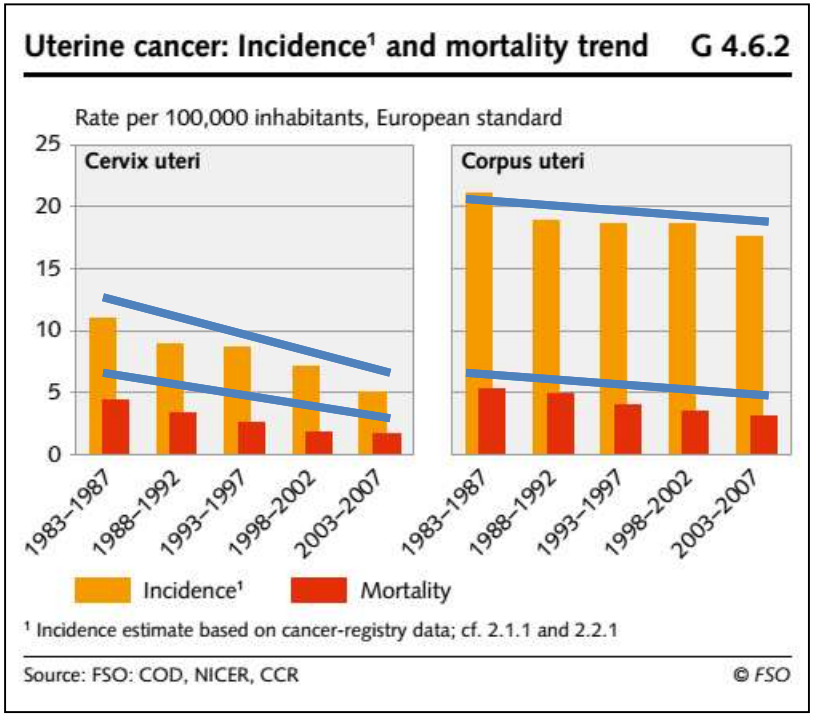




En Suisse: trends

- Cancer du col utérin:
  - Un des cancers en Suisse avec une diminution démontrée de l'incidence sur les 15 dernières années
  - Une diminution de 5% par année
    - 400 cas et 200 décès en 1980
    - 240 cas et 90 décès en 2007
  - Une motalité < à la moyenne européenne

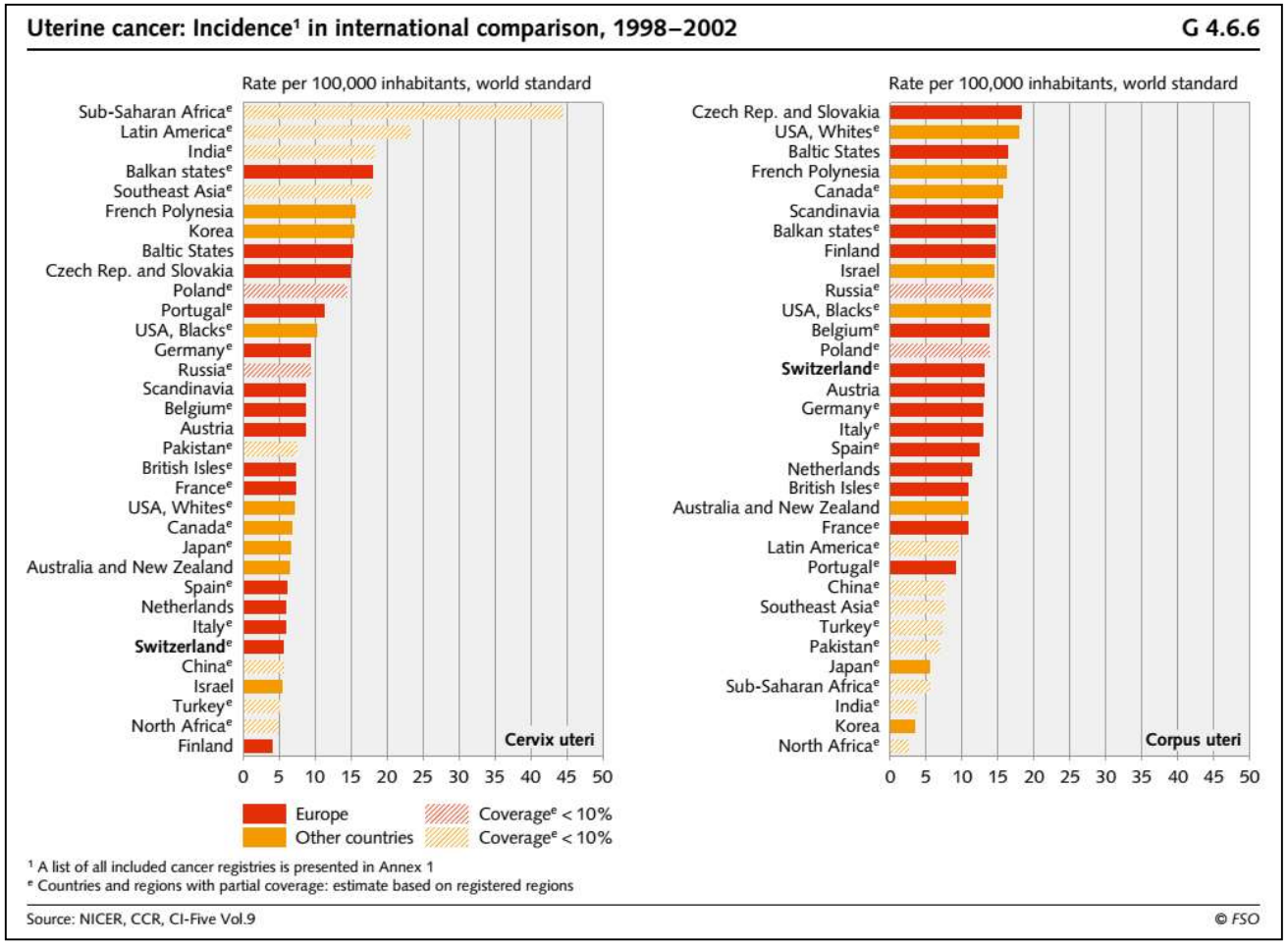
En Suisse: cancer du col utérin

- Actuellement:
  - @ 240 cas/an dans tout le pays
  - @ 90 décès/an (@ 1.3% des décès par cancer chez les femmes suisses)
  - > 50% des cas chez des femmes de < 50 ans
  - Pronostic:
    - Survie à 5 ans d'environ 68% (2e rang des pays européens)

En Suisse: cancer de l'endomètre

- Actuellement:
  - @ 900 cas/an
  - @ 200 décès/an (3% des décès chez les femmes)
  - > 50% des cas chez des femmes > 70 ans
  - Pronostic:
    - Survie à 5 ans d'environ 79% (légèrement supérieure à la moyenne européenne)

Suisse vs. le reste du monde



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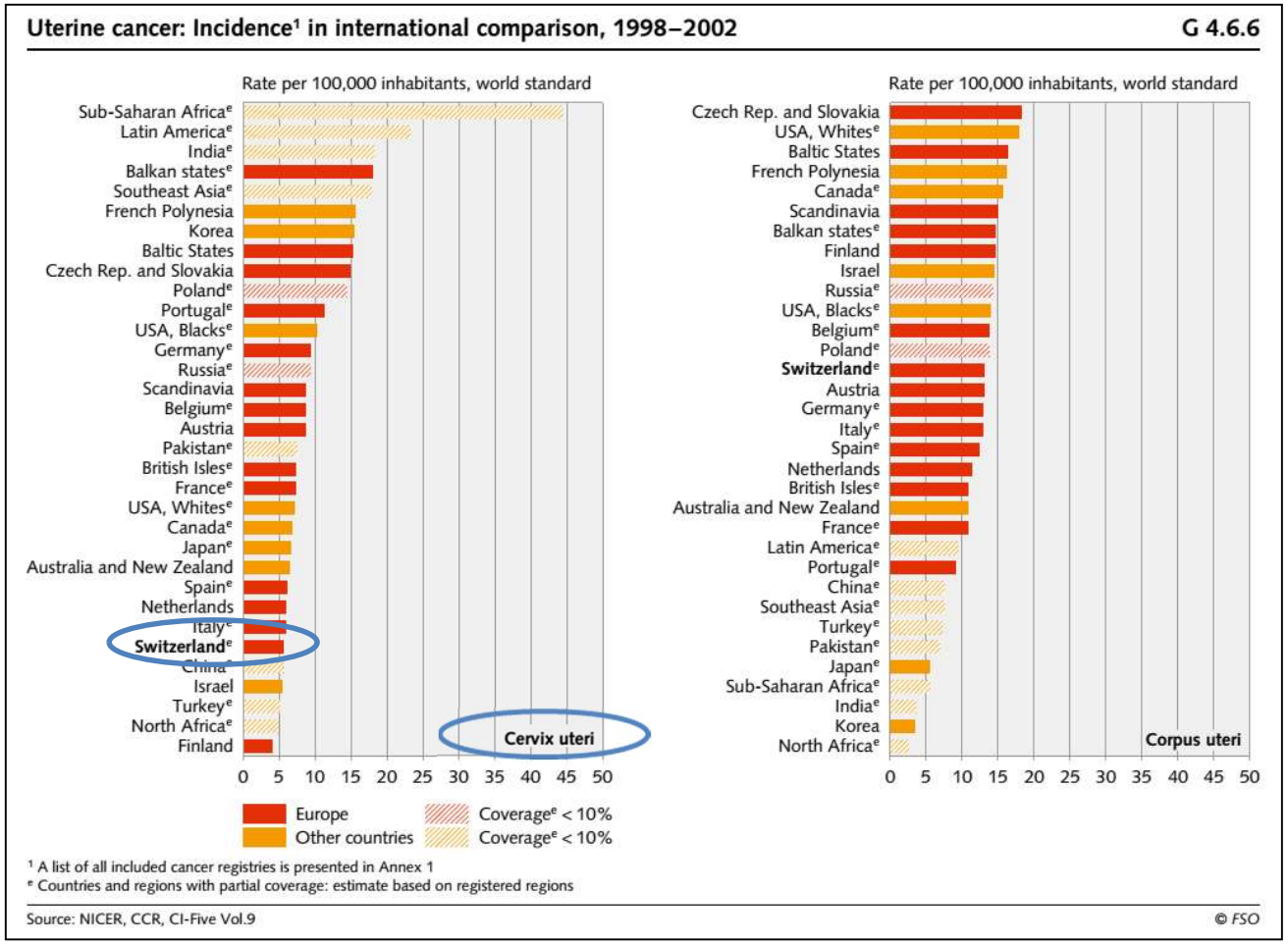

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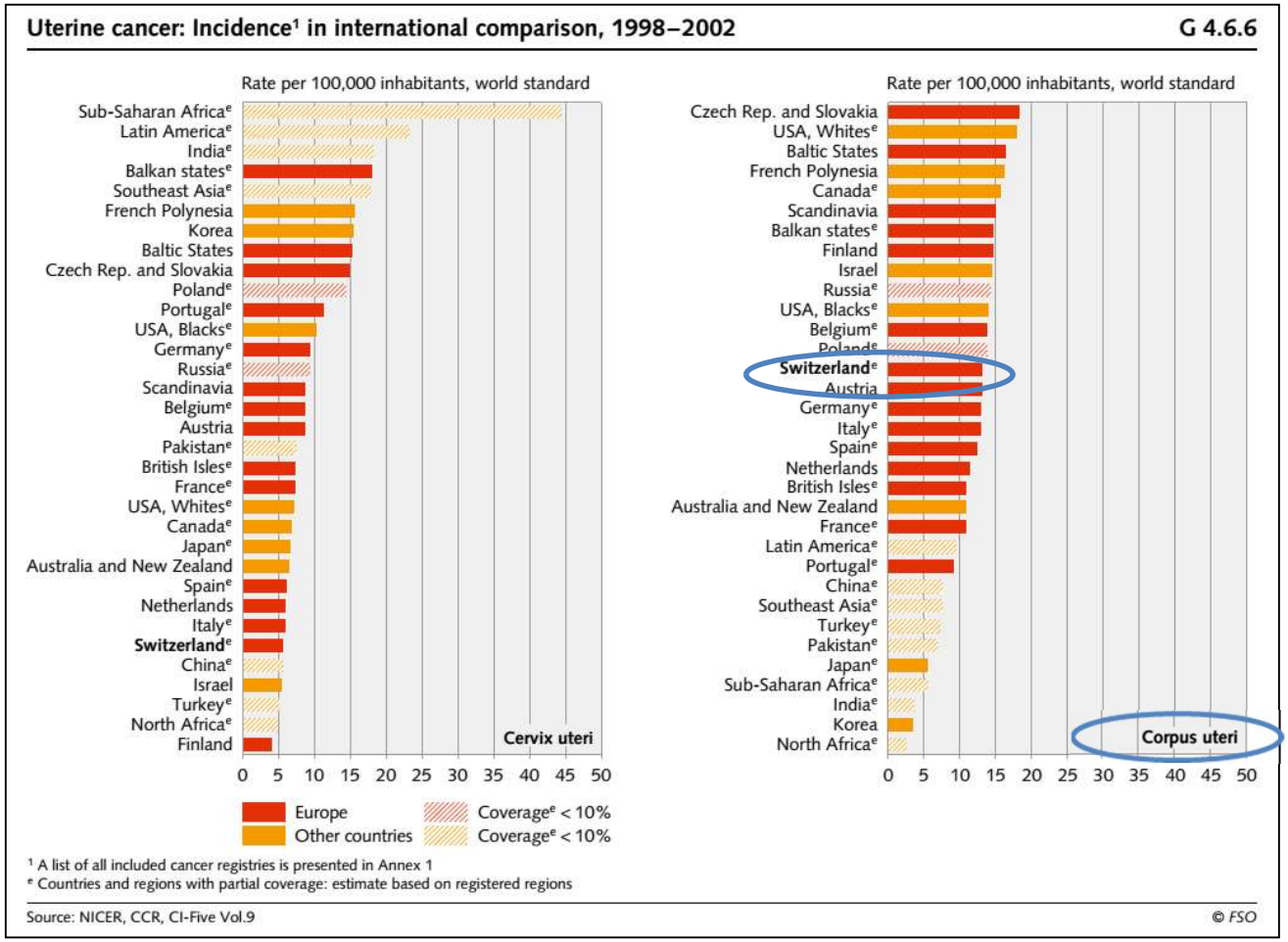

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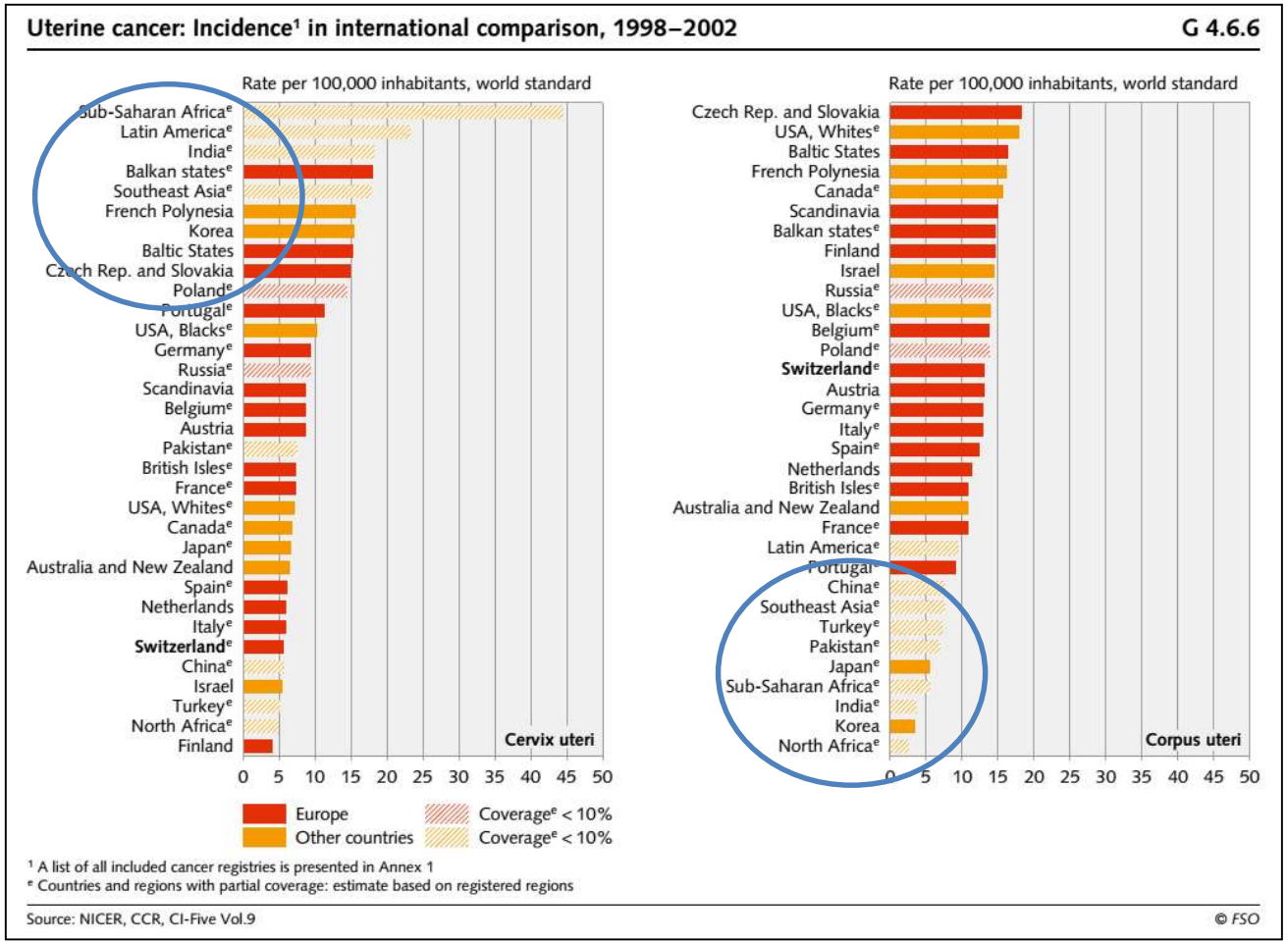

Les cancers utérins et la disparité socio-économique

- Cancer du col
  - 83% des cas mondiaux dans les pays en voie de développement
  - Un facteur de 10 entre l'incidence dans les pays à plus haut risque et les pays au plus bas risque
- Cancer de l'endomètre
  - Une maladie plutôt des pays industrialisés (par un facteur de 10 environ, dans l'autre sens…)
  - Une estimation: 40% des cas dûs à l'obésité

Plan

- Quelques généralités
- Les cancers de l'endomètre
- Les cancers du col
- Les cancers de l'ovaire (pour votre culture médicale générale)
- Les cancers de la vulve et du vagin (qques slides)
- Toxicités de la RT
- Quelques cas cliniques
- Take home messages et questions

Plan

- Quelques généralités
- Les cancers de l'endomètre
- Les cancers du col
- Les cancers de l'ovaire (pour votre culture médicale générale)
- Les cancers de la vulve et du vagin (qques slides)
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- Quelques cas cliniques
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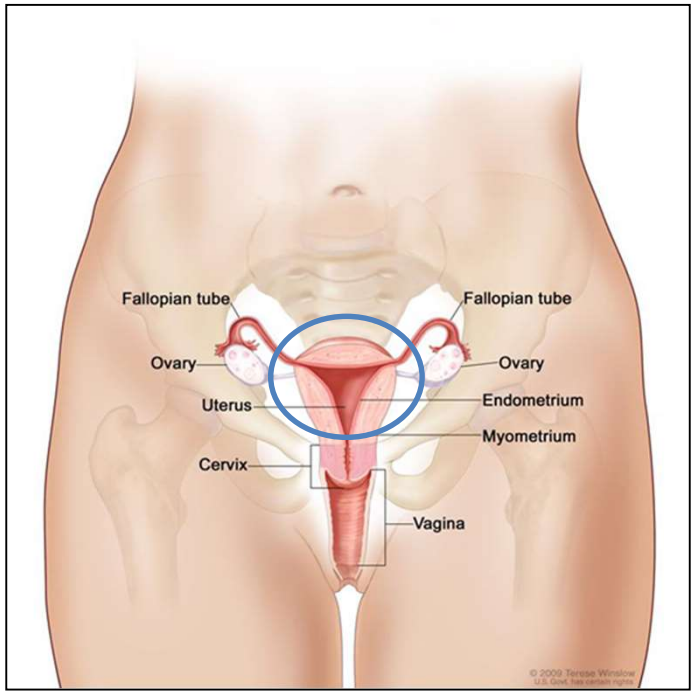
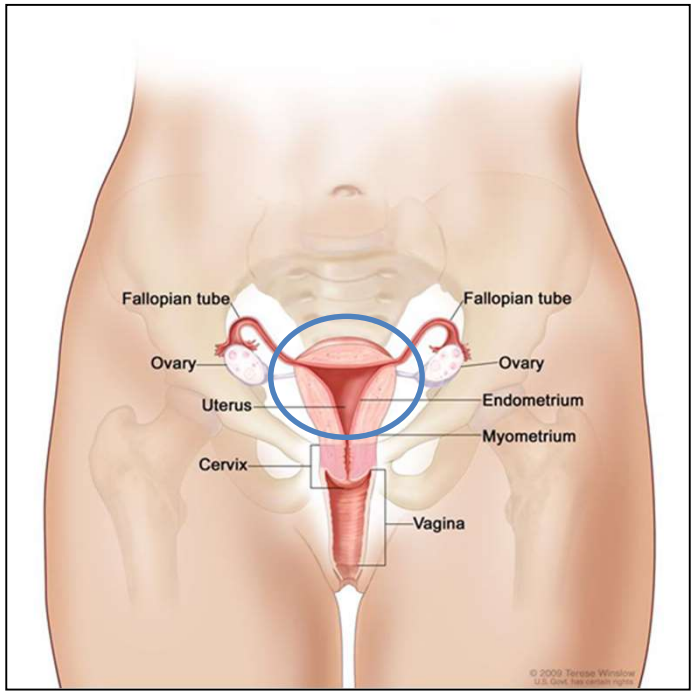
Le cancer de l’endomètre

- Le cancer gynécologique le plus fréquent dans les pays industrialisés
- En 2e place derrière le cancer du col dans les pays en voie de développement
- 320’000 cas en 2012 au niveau mondial



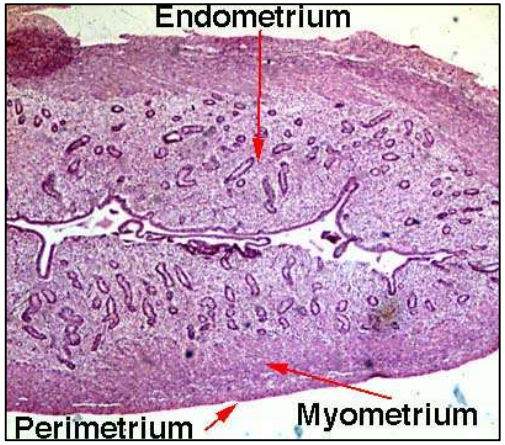
Le cancer de l'endomètre

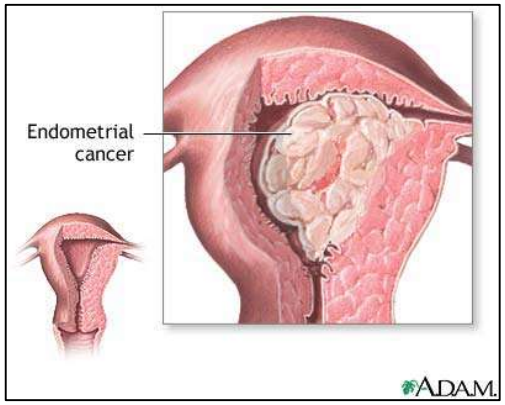
- Maladie plutôt de la femme âgée (et aisée?)
  - 75% des cas de 2005 à 2009 aux USA chez les femmes de > 55 ans
  - 1 femme sur 40 en sera atteint dans sa vie dans les pays industrialisés
  - Plutôt bon pronostic:
    - 70% diagnostiqués à un stade confiné à l'utérus



Cancer de l'endomètre: Rappel d'anatomie

- Carcinomes prenant leur origine dans l'endomètre = tissu glandulaire tapissant l'intérieur de l'utérus, sensible a la stimulation par les oestrogènes





Cancer de l'endomètre: Histopathologie

- On distingue:
  - Les carcinomes de «type I»
    - Adénocarcinomes dits «endométrioïdes» de grade 1 ou 2 (sur 3 possibles)
  - Les carcinomes de «type II» (= tous les autres)
    - Adénocarcinomes endométrioïdes de grade 3
    - Les tumeurs sereux, à cellules claires, et autres sous-types histologiques rares, de haut grade par définition

Cancer de l'endomètre: Présentation clinique

- Présentation classique:
  - Une femme ménopausée qui développe des saignements vaginaux
  - Diagnostic différentiel large, signe d'un cancer de l'endomètre dans 3 à 20% des cas
  - Signe d'appel permettant le diagnostic souvent à un stade précoce, d'où un relativement bon pronostic global dans cette maladie
  - Autres: saignements anormaux (fréquence, volume, moment du cycle) chez des femmes plus jeunes; écoulement vaginal

Cancer de l'endomètre: Facteurs de risque

- Pour les adénocarcinomes classiques:
  - Un excès d'oestrogène exogène (ou analogue)
    - Substitution post-ménopausique
    - Tamoxifen (antagoniste sélectif dans sein, agoniste dans utérus)
  - Un excès d'oestrogène endogène
    - Obésité
    - Anovulation (syndromes d'ovaires polykystiques, nulliparité)
    - Règles à un jeune âge
  - Autres?
    - Age
    - Pas de facteur génétique clair en général, mais tendance familiale
    - Syndrome de Lynch (→ cancers colo-rectaux, ovariens, utérins)

Cancer de l'endomètre: Facteurs de risque

- L'obésité:
  - Production d'oestrogène chez la femme ménopausée par les «aromatases» dans la graisse corporelle
    - Petit rappel: les «anti-aromatases» (létrozole, anastrozole) sont une des hormonothérapies communes dans le cancer du sein chez la femme ménopausée
  - Autres effets (résistance à l'insuline, etc) avec un impact via d'autres voies physiologiques
  - Une corrélation a été montrée entre l'IMC (indice de masse corporelle) et le risque
  - Par contre, une corrélation du surpoids plutôt avec l'histologie endométrioïde, moins aggressive

Cancer de l'endomètre: Facteurs protecteurs (?)

- Contraceptifs oraux (contenant un progestatif)
- Exercise physique
- Tabac? (mais contre-balancé par d'autres risques pour la santé…)
- Café?
- Thé vert?
- …

Cancer de l'endomètre: Mode d'extension

- Progression *locale* vers
  - Utérus, col, vagin, paramètres/annexes, vessie, rectum, "ensemencement" péritoine
- Progression *régionale* vers
  - Ganglions pelviens
  - Ganglions para-aortiques
- Progression a distance
  - Métastases pulmonaires > foie/os >> autres localisations

Cancer de l'endomètre: Staging

- Deux systèmes:
  - FIGO (pour «Fédération intérnationale de gynécologie et obstétrique»)
    - Système chirurgical/pathologique seulement
  - TNM
    - Système clinique et radiologique (cTx cNx cMx) et pathologique (pTx pNx pMx)
  - Depuis 2010, classification commune

Cancer de l'endomètre: Staging

Staging uterine carcinoma* (TNM and International Federation of Gynecology and Obstetrics [FIGO])

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Cancer de l'endomètre: Staging et pronostic

Uterine carcinoma: FIGO surgical stage and overall survival

FIGO stage	Overall survival, percent		
	Two years*	Five years*	Five years ¶
IA	97	91	90
IB	97	91	78
IC	94	85	-
II	-	-	74
IIA	93	83	-
IIB	85	74	-
IIIA	80	66	56
IIIB	62	50	36
IIIC	75	57	-
IIIC1	-	-	57
IIIC2	-	-	49
IVA	47	26	22
IVB	37	20	21

* Data from: FIGO for patients treated in 1999 through 2001, using the original 1988 FIGO surgical staging classification (from Int J Gynaecol Obstet 2006; 95:S105).
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IA	97	91	90
IB	97	91	78
IC	94	85	-
II	-	-	74
IIA	93	83	-
IIB	85	74	-
IIIA	80	66	56
IIIB	62	50	36
IIIC	75	57	-
IIIC1	-	-	57
IIIC2	-	-	49
IVA	47	26	22
IVB	37	20	21

* Data from: FIGO for patients treated in 1999 through 2001, using the original 1988 FIGO surgical staging classification (from Int J Gynaecol Obstet 2006; 95:S105).

¶ Data from: SEER database for patients treated in 1988 through 2006, staged according to the 2010 FIGO staging system (from Obstet Gynecol 2010; 116:1141).

Cancer de l'endomètre: Staging et pronostic

Uterine carcinoma: FIGO surgical stage and overall survival

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Cancer de l'endomètre: Investigations

- Echographie transvaginale
  - Épaississement endomètre > 4 mm?
- Biopsie (au cabinet en général), et/ou curetage sous anesthésie
- IRM pelvienne
- CT thoraco-abdominal
- Labo avec CA 125 (marqueur potentiel pour atteinte ganglionnaire, et peut être utile pour suivi)

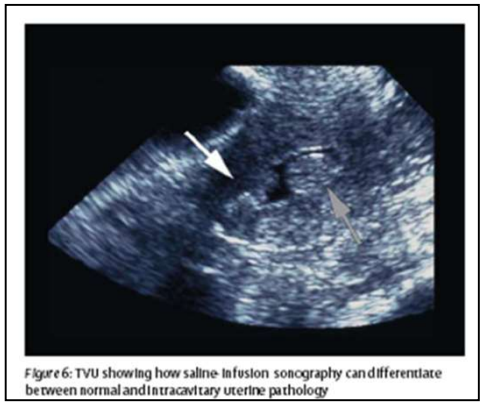
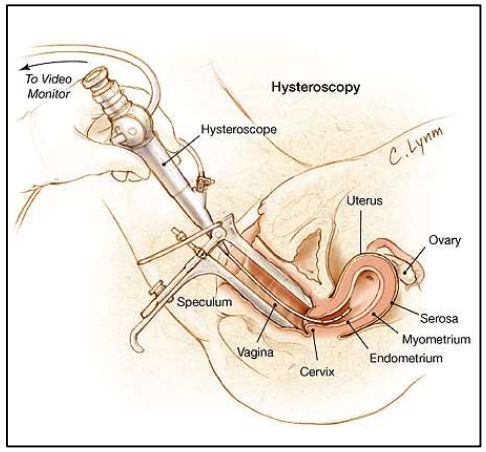
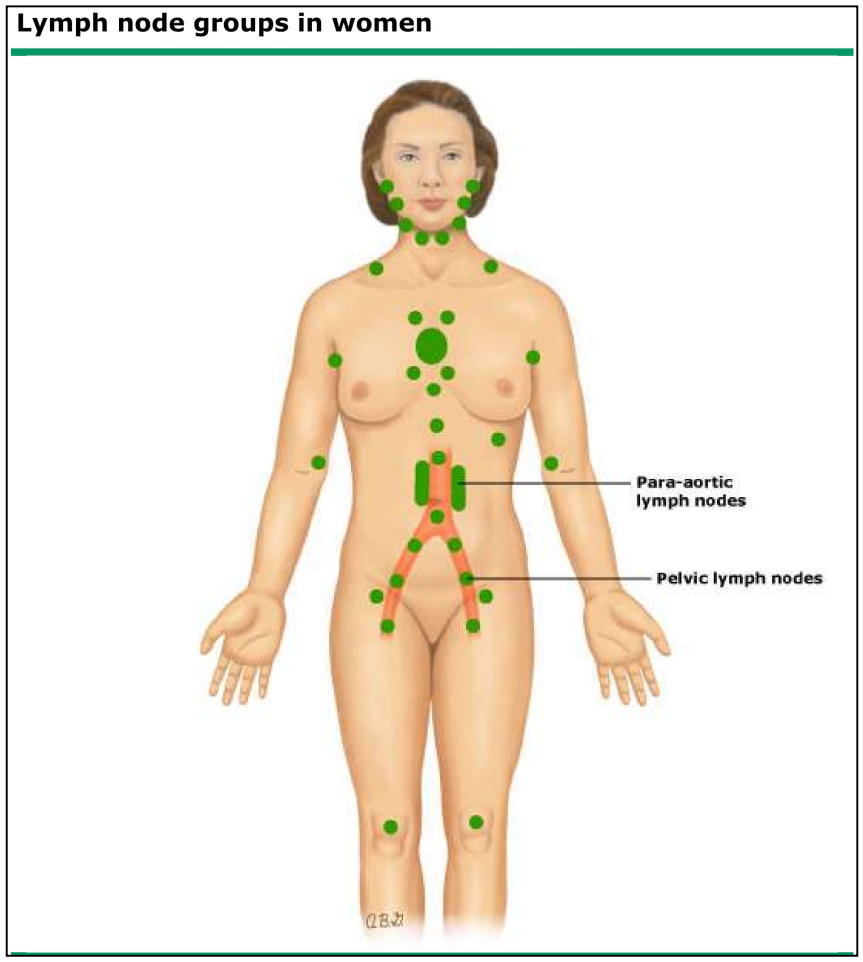


Figure 6: TVU showing how saline-infusion sonography can differentiate between normal and intracavitary uterine pathology



Cancer de l'endomètre: Traitement initial

- En général, 1ère étape = hystérectomie
- Staging ganglionnaire (sampling ou curage pelvien et lombo-aortique) dans toutes les patientes, sauf si hystérectomie initiale et «low-risk»
- D'où le système FIGO, basée sur les résultats des prélèvements chirurgicaux



Cancer de l'endomètre: Traitements adjuvants

- Déterminés par des classes de risque:
  - «Low-risk»
    - Endométrioïde, grade 1, confiné à l'endomètre
  - «Intermediate-risk»
    - Stade IA avec atteinte myomètre, IB, et II
    - Selon plusieurs facteurs pronostiques (grade 2-3, atteinte 1/3 externe du myomètre, invasion lympho-vasculaire, âge), on distingue encore les
      - «Low-intermediate-risk»
      - «High-intermediate-risk»
  - «High-risk»
    - Stade III, histologie sereuse, à cellules claires

Cancer de l'endomètre: Traitements adjuvants

- Low-risk:
  - Aucun, le risque de récidive étant < 5%
  - Plusieurs études montrant que la RT
    - N'augmente pas la survie (la diminue même peut-être)
    - Augmente le risque de deuxièmes cancers
    - Augmente le risque de toxicité digestive et urinaire chronique
- Low-intermediate-risk:
  - Aucun, le risque de récidive étant de 5-6%
  - Etudes semblables montrant une petite réduction du risque de récidive mais pas d'amélioration de la survie, au prix d'une toxicité chronique réelle

Cancer de l'endomètre: Traitements adjuvants

- High-intermediate-risk:
  - Curiethérapie endovaginale seule
    - Etude PORTEC-2 («Post-Operative Radiation Therapy in Endometrial Cancer»)
      - Curiethérapie endovaginale +/- RT externe pelvienne
      - Pas de différence dans le taux de récidive loco-régionale ou à distance
      - Diarrhées chroniques 13% vs 54%
  - Exception: si staging ganglionnaire non effectué, RT pelvienne suivie de curiethérapie endovaginale

Cancer de l'endomètre: Traitements adjuvants

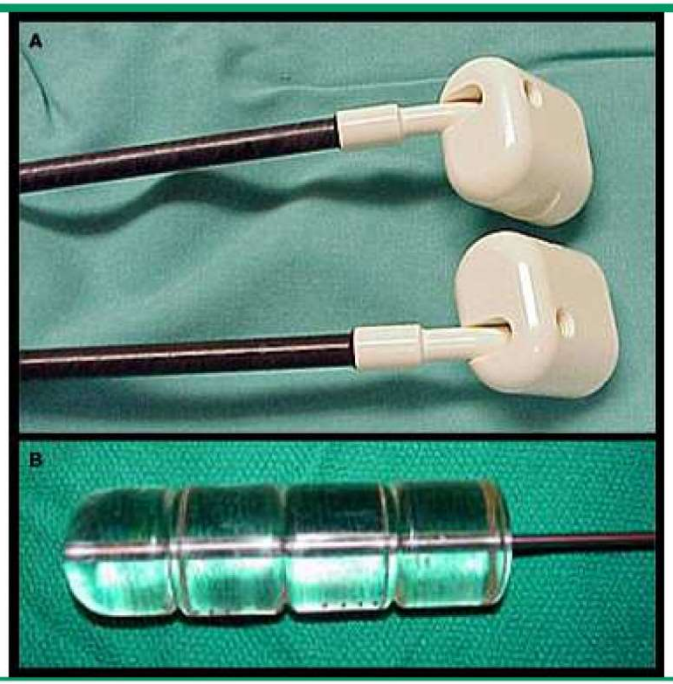
- High-risk:
  - Sereux stade IA sans atteinte myomètre
    - Curiethérapie endovaginale seule
  - Sereux stades IA-B et II
    - Chimiothérapie + curiethérapie endovaginale
  - Cellules claires stades I-II
    - Curiethérapie endovaginale seule
  - Stade III toutes histologies
    - Chimiothérapie +/- RT (pelvienne + curiettt recommandée dans les guidelines ASTRO 2014, mais pas une attitude universelle)

Cancer de l'endomètre: Modalités de la RT

- Curiethérapie endovaginale
  - HDR en général, avec afterloading
  - Fractionnements souvent utilisés:
    - Si curiethérapie seule
      - 7 Gy x 3 fractions, préscrit à une profondeur de 5 mm
      - 5 Gy x 6 fractions, préscrit à la surface
  - Si en boost après RT externe
    - 4-6 Gy en 2-3 fractions, préscrit à la surface
- Si RT externe pelvienne, 45-50 Gy en 25-28 fractions

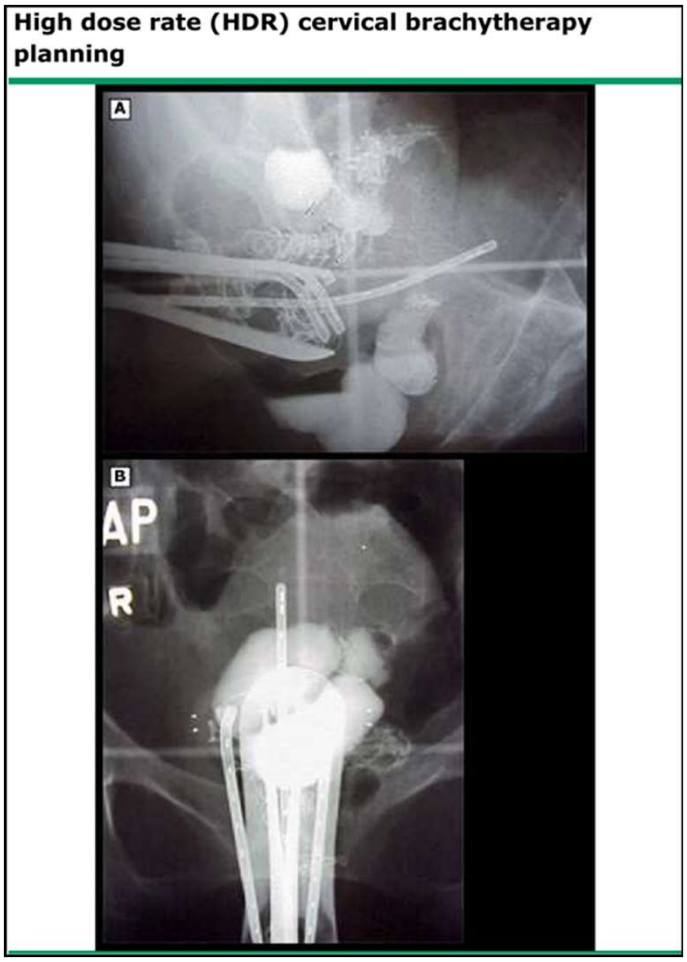
Cancer de l'endomètre: Modalités de la RT

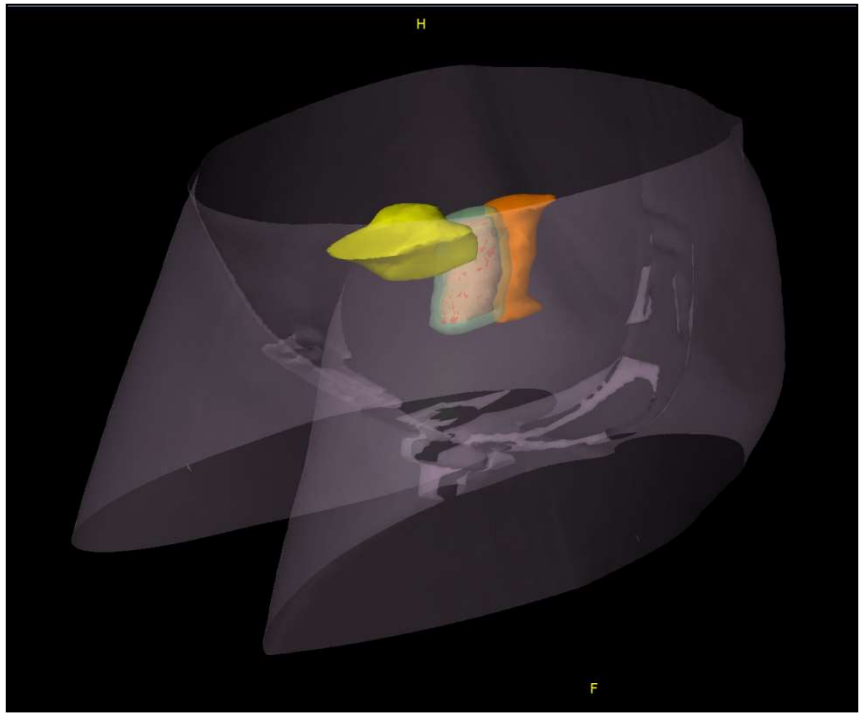
Vaginal cuff brachytherapy applicators



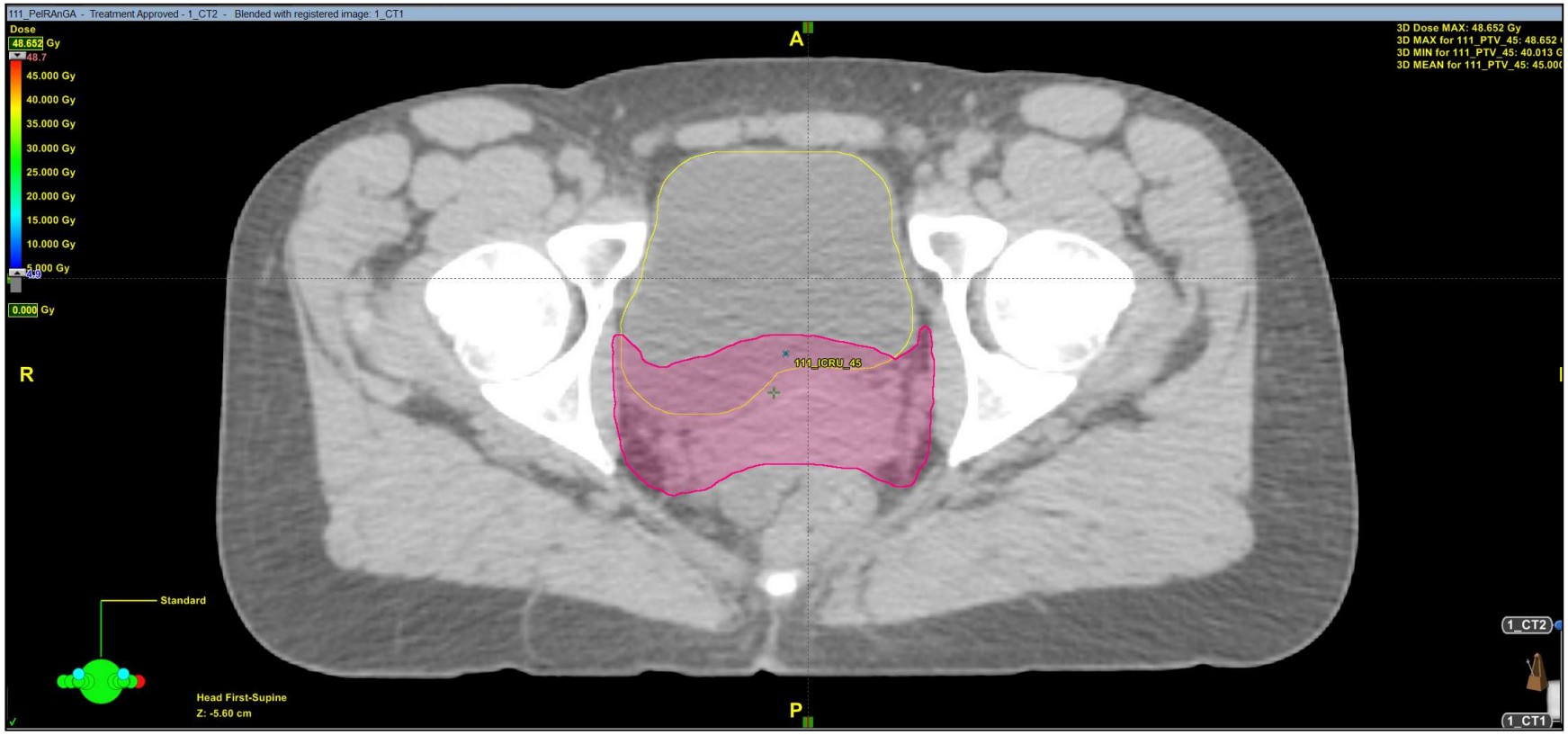
Vaginal ovoids (A) and vaginal cylinders (B) for vaginal cuff brachytherapy for endometrial cancer.

Cancer de l’endomètre: Curiethérapie, le passé et le futur





Cancer de l’endomètre:
Planification de la RT externe



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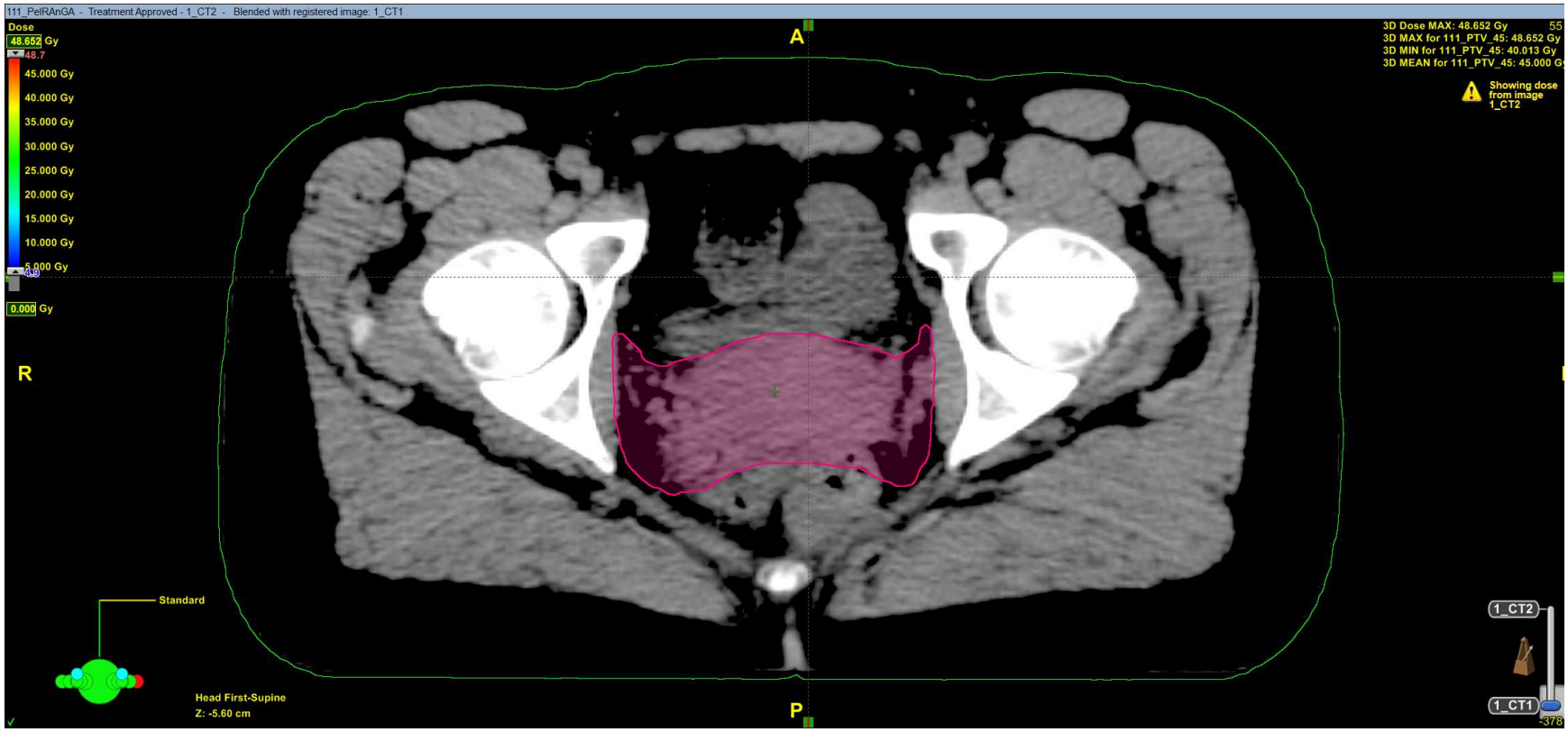

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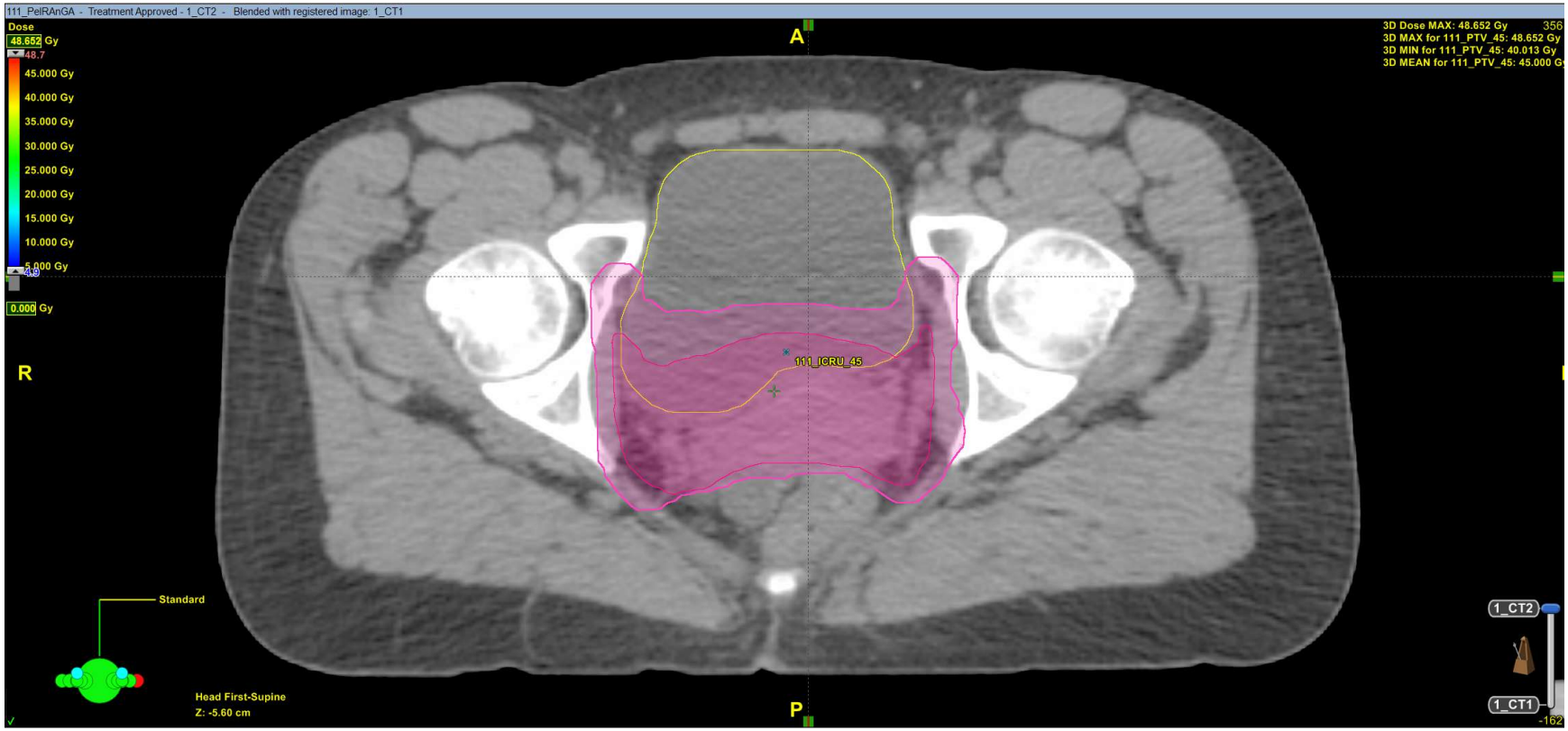

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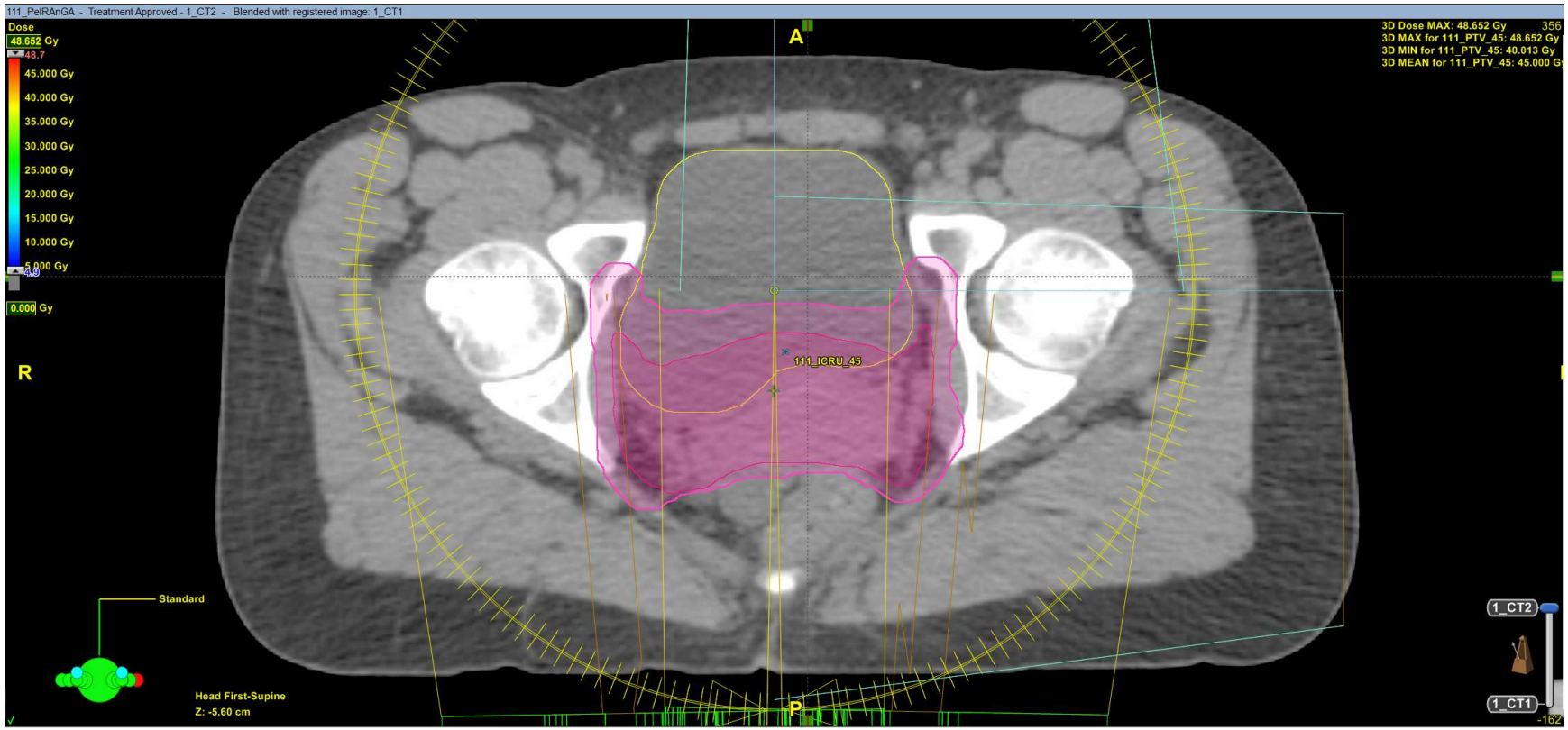

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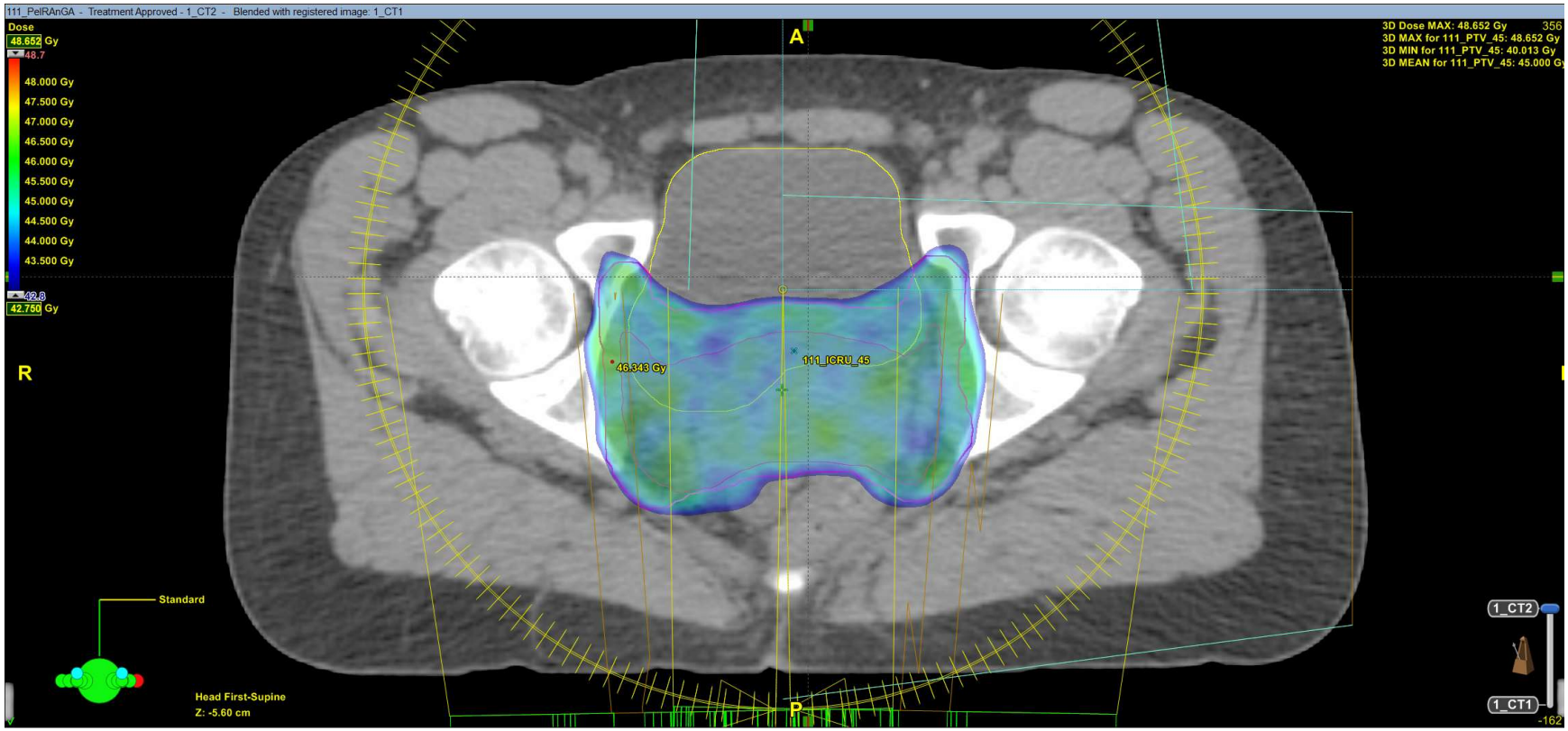
Planification de la RT externe



Plan

- Quelques généralités
- Les cancers de l'endomètre
- Les cancers du col
- Les cancers de l'ovaire (pour votre culture médicale générale)
- Les cancers de la vulve et du vagin (qques slides)
- Toxicités de la RT
- Quelques cas cliniques
- Take home messages et questions

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Cancer du col:
Rappel d'épidemiologie

- Dans les pays industrialisés, 11e plus fréquent des cancers chez la femme, et 9e cause de décès
- Fréquent et mortel dans les pays où l'accès au screening et à la vaccination contre l'HPV est limité
- Dans les pays en voie de développement globalement, le 2e plus fréquent des cancers de la femme et 3e cause de décès
- En Afrique et Amérique centrale, la première cause de décès par cancer chez la femme

Cancer du col:
Facteur(s) de risque

- Le facteur principal
  - HPV (human papillomavirus), retrouvé dans 99,7% des cancers du col
  - Transmission sexuelle
  - Les facteurs de risque classiques par extension
    - Jeune âge au premiers rapports
    - Partenaires multiples (2 partenaires = double risque, 6 partenaires = triple risque)
    - Autres maladies sexuellement transmissibles, ou partenaire à haut risque
    - Immunosuppression
  - Autres: Tabac? Génétique?

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  - Autres: Tabac? Génétique?

Cancer du col: Histopathologie

- Carcinomes épidermoïdes:
  - Environ 70%
- Adénocarcinomes
  - Environ 25%
- Autres rares
  - Environ 6%
  - Carcinomes neuroendocrines, sarcomes, carcinosarcomes, etc

Cancer du col:
Les dysplasies précurseurs

- CIN = « cervical intraepithelial neoplasia »
  - CIN I = dysplasie légère
  - CIN II = dysplasie modérée
  - CIN III = dysplasie sévère / carcinome in situ
- Lésions précurseurs des carcinomes invasifs, en général guérissables (conisation, LEEP, …)
- Non traités, environ 10-15% progressent vers carcinomes invasifs
- Interêt des **programmes de dépistage**

Cancer du col:
Le dépistage

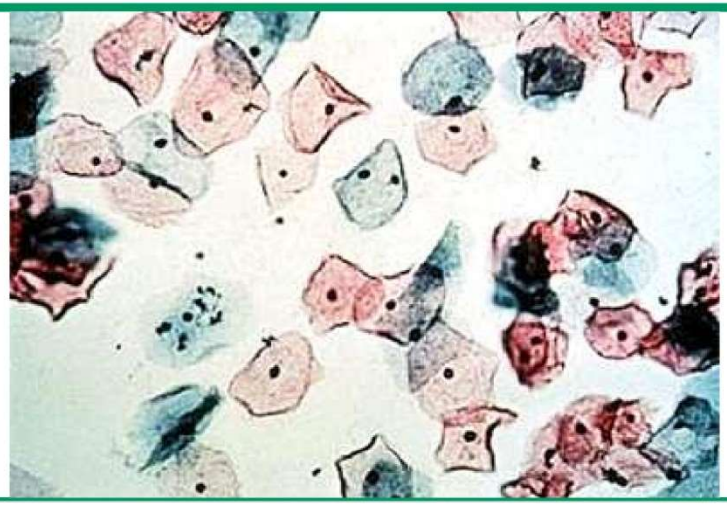
- Plus de 50% des femmes diagnostiquées d'un cancer du col n'ont pas été suivies correctement dans un programme de dépistage
- Aux USA
  - Introduction du dépistage par frottis dans les années '50
  - De 1950 à 1980: diminution de l'incidence de 70%

Cancer du col:
Le dépistage

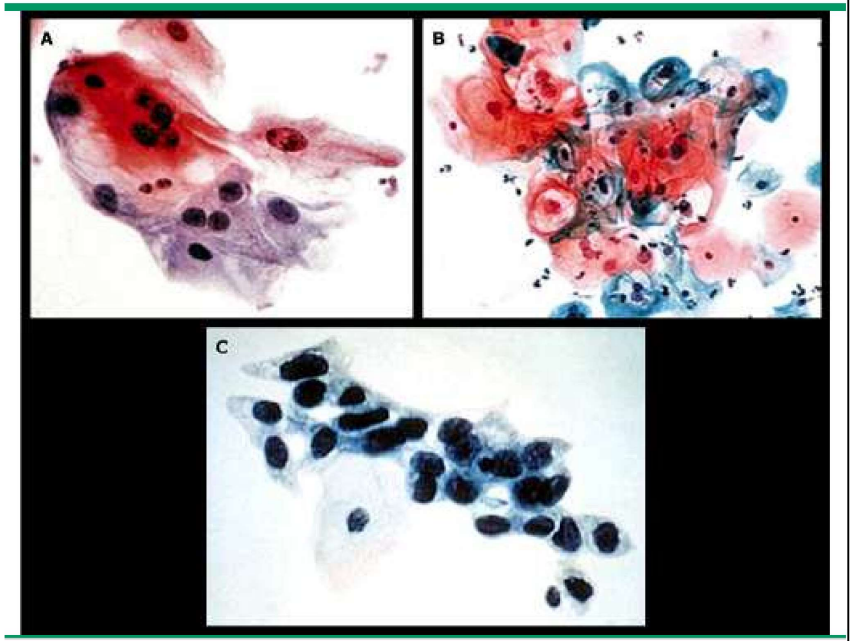
- Aux USA
  - Frottis cytologique dès 21 ans
  - Recherche HPV recommandée dès 30 ans
  - Un frottis tous les 3 ans, ou
  - Un frottis + recherche HPV tous les 5 ans sauf si résultat anormal
  - Jusqu'à 65 ans en général, sauf si haut risque ou pas correctement suivies auparavant
  - Plus fréquent chez les patientes immunosupprimées

Cancer du col:
Frottis de dépistage

Normal pap smear

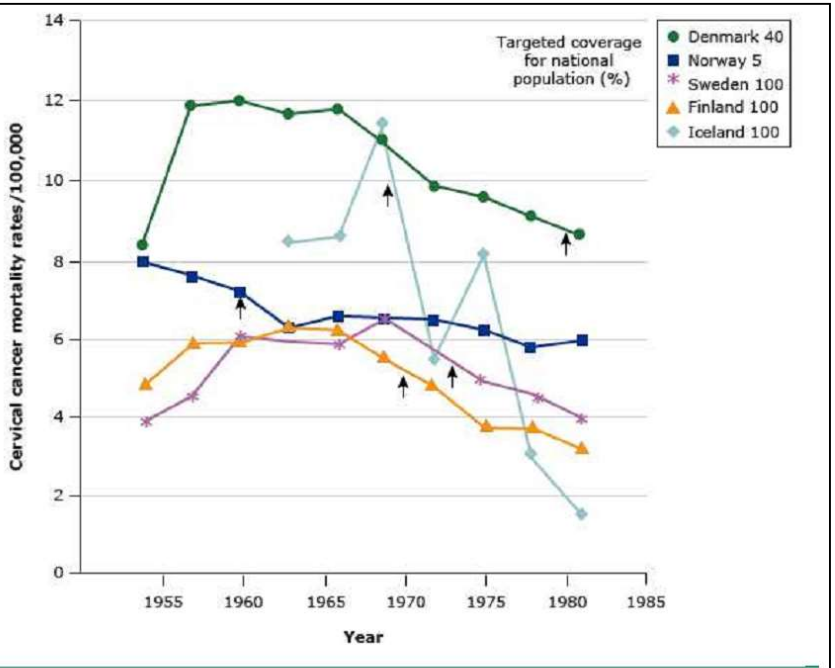


Abnormal pap smear

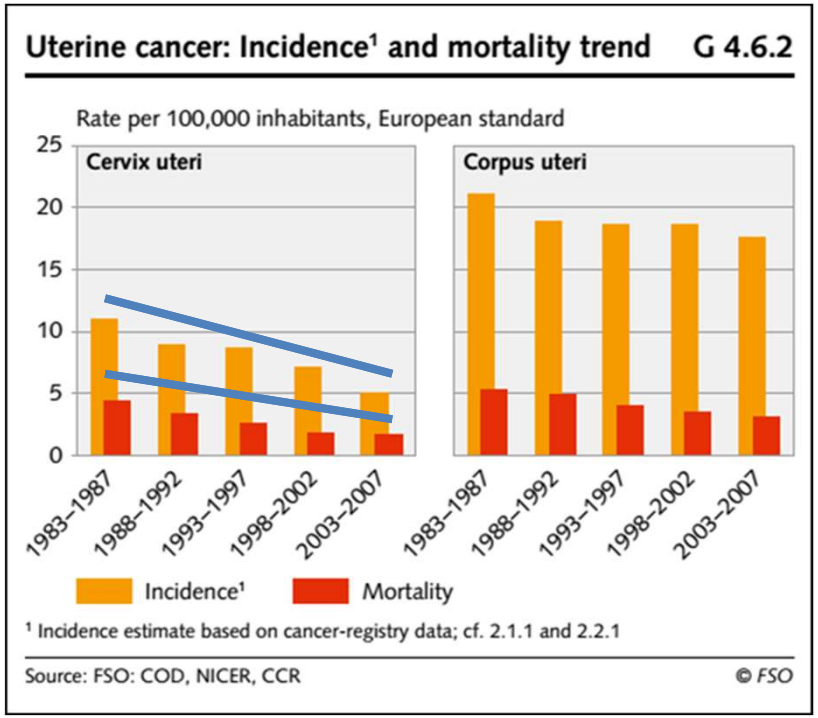


A) Atypical squamous cells of undetermined significance (ASCUS). B) Low grade squamous intraepithelial lesion (LSIL). C) High grade squamous intraepithelial lesion (HSIL).

Cancer du col:
L'apport du dépistage



Change in cervical cancer mortality rates according to year organized Pap smear screening programs were implemented and targeted coverage. Arrows mark the year coverage was achieved for each country. (Redrawn with permission from Laara E, Day NE, Hakama M. Trends in mortality from cervical cancer in Nordic countries: association with organized screening programmes. Lancet 1987; 1:1247).



Cancer du col:
Le Human Papillomavirus (HPV)

- Impliqué dans plusieurs types de cancer
- On estime qu'il est responsable d'environ
  - 100% (!) des carcinomes du col
  - 70% des carcinomes du vagin
  - 40% des carcinomes de la vulve
  - 90% des carcinomes de l'anus
  - 50% des carcinomes du pénis
  - Une fraction grandissante des carcinomes de l'oropharynx
  - En plus de 90% des condylomes génitaux

Cancer du col:
HPV

- 40 sous-types identifiés au niveau des muqueuses génitales
- On estime que 75-80% des adultes sexuellement actifs seront porteurs d'un ou plusieurs types avant l'âge de 50 ans
- Dans le cancer du col
  - Types 16 et 18 responsables d'environ 70%
  - Types 31, 33, 45, 52, et 58 → encore 19%

Cancer du col:
La vaccination anti-HPV

- Introduite en Suisse en 2007, comme un peu partout dans le monde industrialisé, suite à plusieurs grandes études montrant son efficacité
- Plusieurs vaccins disponibles
  - Gardasil® = «quadrivalent», conférant une immunité contre les types 16 et 18 (cancer du col) et les types 6 et 11 (condylomes)
  - Gardasil 9® = «9-valent», conférant une immunité également contre les types 31, 33, 45, 52, et 58
  - Deux ou trois doses

Cancer du col:
La vaccination anti-HPV

- Efficacité claire
- Estimation: si 70% couverture au niveau mondial, on pourrait éviter environ 350'000 nouveau cas/année (65%) et sauver environ 180'000 vies (65% des décès dûs à ce cancer)
- L'exemple de l'Australie
  - > 70% couverture
  - Déjà une réduction de 40% de dysplasies de haut grade, malgré la latence attendue de 10-15 ans

Cancer du col:
La vaccination anti-HPV en Suisse

Plan de vaccination suisse

Vaccinations de base									Vaccinations complémentaires		
Age	DTP	Polio	Hib	HBV	ROR	HPV	Varicelle	Grippe	Pneumocoques	Méningocoques	HPV
2 mois	DTPa	IPV	Hib	(HBV)					PCV		
4 mois	DTPa	IPV	Hib	(HBV)					PCV		
6 mois	DTPa	IPV	Hib	(HBV)							
12 mois					ROR				PCV		
12–15 mois										MCV-C	
15–24 mois	DTPa	IPV	Hib	(HBV)	ROR						
4–7 ans	DTPa	IPV			✓						
11–14/15 ans	dTpa	✓		HBV	✓	HPV♀	VZV			MCV-C	HPV♂
25–29 ans	dTpa	✓		✓	✓		✓				HPV
45 ans	dT	✓		✓	✓						
≥ 65 ans	dT							Grippe			

✓ Vérifier que les vaccinations soient complètes : si ce n'est pas le cas, procéder au rattrapage vaccinal.

Plan de vaccination 2015

Cancer du col:
La vaccination anti-HPV en Suisse

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12–15 mois										MCV-C	
15–24 mois	DTPa	IPV	Hib	(HBV)	ROR						
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25–29 ans	dTpa	✓		✓	✓		✓				HPV
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Plan de vaccination 2015

Cancer du col:
La vaccination anti-HPV en Suisse

Maladies transmissibles

Vaccination contre les HPV : recommandation de vaccination complémentaire pour les garçons et jeunes hommes âgés de 11 à 26 ans

Depuis 2007, la vaccination contre les papillomavirus humains (HPV) est recommandée en Suisse pour toutes les filles et les jeunes femmes à titre de vaccination de base afin de prévenir le développement du cancer du col de l'utérus et d'autres maladies provoquées par les HPV. Sur la base des dernières connaissances scientifiques, l'OFSP et la CFV recommandent aujourd'hui d'étendre la vaccination aux garçons et aux jeunes hommes âgés de 11 à 26 ans, de préférence entre 11 et 14 ans, avant le début de l'activité sexuelle. Cette vaccination est recommandée à titre de vaccination complémentaire pour la prévention des cancers et des verrues génitales associés aux HPV.

ment de la néoplasie [5;9–12]. Plus de 80 % des cancers de l'anus sont causés spécifiquement par les HPV de types 16 et 18, dont les antigènes sont contenus dans les vaccins [9;12;13]. Le tableau 1 ci-dessous montre quels pourcentages de ces cancers sont associés aux HPV16 /18.

Le poids total des tumeurs associées aux HPV chez les hommes et les femmes est estimé à environ 5 % de l'ensemble des cancers dans le monde, celui qui pèse sur les femmes étant toutefois le plus important [12]. Certaines données font état d'une augmentation de l'incidence des tumeurs induites par les HPV chez les deux sexes [14–16].

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La vaccination anti-HPV en Suisse

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Cancer du col:
La vaccination anti-HPV en Suisse

Tableau 1

Nombre moyen de cas et taux d'incidence (pour 100 000 personnes-années, standardisé sur l'âge) de nouveaux diagnostics de cancer en Suisse (période: 2007–2011, NICER [17]) et proportion des cas de cancer induits par les HPV16/18 (estimation sur la base de données recueillies à l'échelle internationale [9;12]). En raison du faible nombre de cas, le NICER ne publie pas de données sur les cancers du pénis, de la vulve et du vagin.

	Hommes	Femmes
Oropharynx, amygdales, base de la langue (ICD-10 C01, C09-10)	274 cas/année[a] Incidence: 6,2/100 000[a] HPV16/18: 12–50 %[c]	92 cas/année[a] Incidence: 1,9/100 000[a] HPV16/18: 12–50 %[c]
Anus et canal anal (ICD-10 C21)	57 cas/année[b] Incidence: 1,2/100 000[b] HPV16/18: 81 %[c]	121 cas/année[b] Incidence: 2,3/100 000[b] HPV16/18: 81 %[c]
Cervix (ICD-10 C53)		252 cas/année[b] Incidence: 5,3/100 000[b] HPV16/18: >70 %[c]
Total	331 cas/année	465 cas/année
Total des cas associés aux HPV16/18 et donc théoriquement évitables par la vaccination	79–183 cas/année	285–320 cas/année

Cancer du col:
La vaccination anti-HPV en Suisse

Tableau 1

Nombre moyen de cas et taux d'incidence (pour 100 000 personnes-années, standardisé sur l'âge) de nouveaux diagnostics de cancer en Suisse (période: 2007–2011, NICER [17]) et proportion des cas de cancer induits par les HPV16/18 (estimation sur la base de données recueillies à l'échelle internationale [9;12]). En raison du faible nombre de cas, le NICER ne publie pas de données sur les cancers du pénis, de la vulve et du vagin.

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Cancer du col:
Présentation clinique

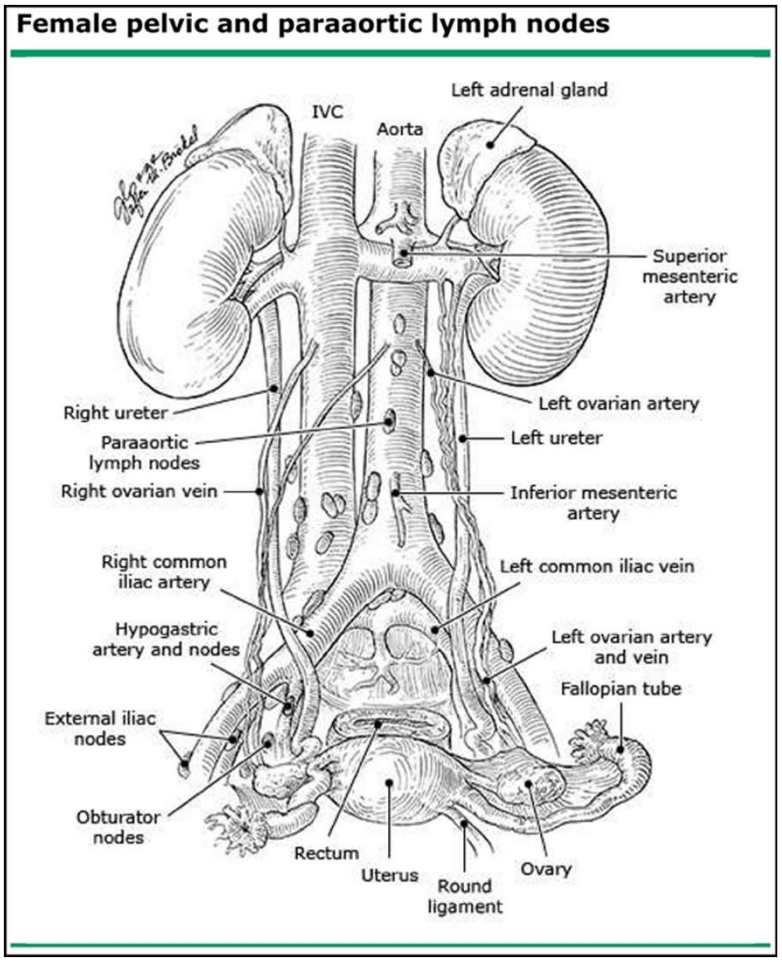
- Dysplasies / in situ:
  - En général, *pas!* (d'où le « dépistage » par frottis)
- Carcinomes invasifs:
  - Saignements vaginaux anormaux
  - Ecoulement souvent décrit comme « nauséabond »
  - Si avancé: douleurs pelviennes, urines fréquentes, œdème membres inférieurs, insuffisance rénale

Cancer du col:
Modes d'extension

- Locale
  - Infiltration des organes avoisinants (vagin, rectum, vessie, paramètres, péritoine)
- Régionale
  - Drainage vers les ganglions iliaques externes (premier rélais dans 40%), obturateurs (25%), paramétriaux (20%), iliaques communs (5%), présacrés et para-aortiques (<5%)
- Métastatique:
  - Poumon, foie, os >> surrénales, rate, cerveau

Cancer du col: Dissémination para-aortique

- Risque de dissemination para-aortique:
  - > 10% dans les stades IIA
  - 30% dans les stades IIB et IIIA
  - 50% dans les stades IVA
- Implications pour la RT («EFRT» = extended-field RT si atteinte)



Staging

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T2a	IIA	Tumor without parametrial invasion or involvement of the lower one-third of the vagina [1,2]
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T2a1	IIA1	Clinically visible lesion 4.0 cm or less in greatest dimension with involvement of less than the upper two-thirds of the vagina
T2a2	IIA2	Clinically visible lesion more than 4.0 cm in greatest dimension with involvement of less than the upper two-thirds of the vagina
T2b	IIB	Tumor with parametrial invasion
T3	III	Tumor extends to pelvic wall and/or involves lower third of vagina, and/or causes hydronephrosis or nonfunctioning kidney
T3a	IIIA	Tumor involves lower third of vagina, no extension to pelvic wall
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T4	IVA	Tumor invades mucosa of bladder or rectum, and/or extends beyond true pelvis (bullous edema is not sufficient to classify a tumor as T4)

Staging

- Systèmes FIGO et TNM
- FIGO: staging clinique et chirurgical adapté aux pays en voie de développement et basé sur certains examens « permis » (Rx thorax et pyélogramme, mais pas de CT, IRM, PET-CT)

Staging cervical cancer (TNM and International Federation of Gynecology and Obstetrics [FIGO])

Primary tumor (T)		
TNM categories	**FIGO stages**	**Definition**
TX		Primary tumor cannot be assessed
T0		No evidence of primary tumor
Tis*		Carcinoma in situ (preinvasive carcinoma)
T1	I	Cervical carcinoma confined to uterus (extension to corpus should be disregarded)
T1a ¶	IA	Invasive carcinoma diagnosed only by microscopy. Stromal invasion with a maximum depth of 5.0 mm measured from the base of the epithelium and a horizontal spread of 7.0 mm or less. Vascular space involvement, venous or lymphatic, does not affect classification.
T1a1	IA1	Measured stromal invasion 3.0 mm or less in depth and 7.0 mm or less in horizontal spread
T1a2	IA2	Measured stromal invasion more than 3.0 mm and not more than 5.0 mm in depth with a horizontal spread 7.0 mm or less
T1b	IB	Clinically visible lesion confined to the cervix or microscopic lesion greater than T1a/IA2
T1b1	IB1	Clinically visible lesion 4.0 cm or less in greatest dimension
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Staging

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Cancer du col: Pronostic

Survival by FIGO stage for patients with cervical cancer: 1999 to 2001 FIGO statistics

FIGO stage	Number of patients	Overall survival (percent)		
		One year	Two years	Five years
IA1	829	99.8	99.5	97.5
IA2	275	98.5	96.9	94.8
IB1	3020	98.2	95.0	89.1
IB2	1090	95.8	88.3	75.7
IIA	1007	96.1	88.3	73.4
IIB	2510	91.7	79.8	65.8
IIIA	211	76.7	59.8	39.7
IIIB	2028	77.9	59.5	41.5
IVA	326	51.9	35.1	22.0
IVB	343	42.2	22.7	9.3

FIGO: International Federation of Gynecology and Obstetrics.

microscopique

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< 4 cm

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> 4 cm ou 2/3 sup du vagin

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paramètres

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1/3 inf vagin ou paroi pelvis ou hydronéphrose

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FIGO: International Federation of Gynecology and Obstetrics.

Vessie, rectum

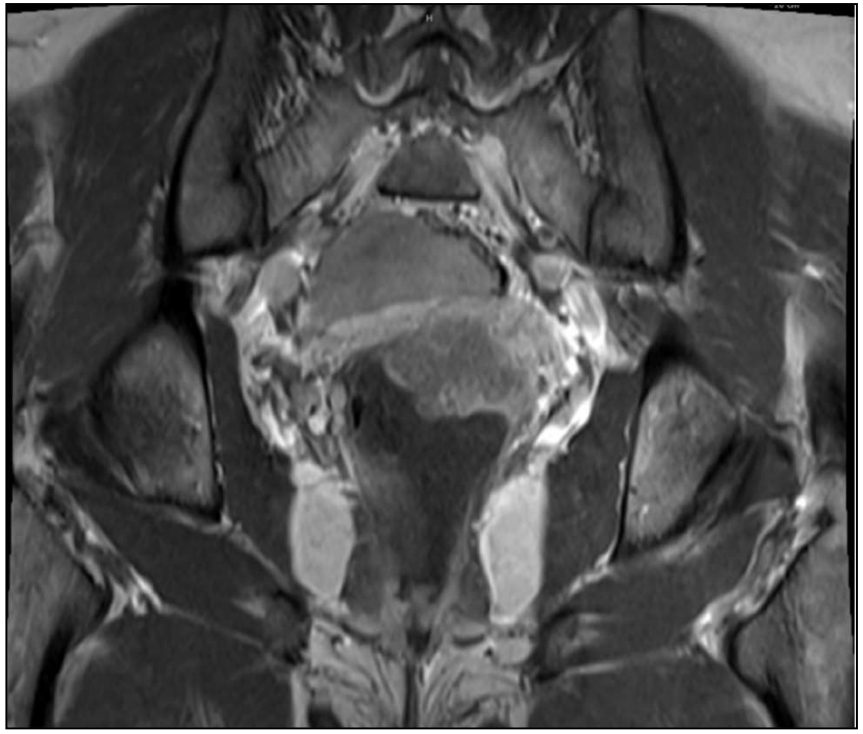
Cancer du col:
Staging FIGO

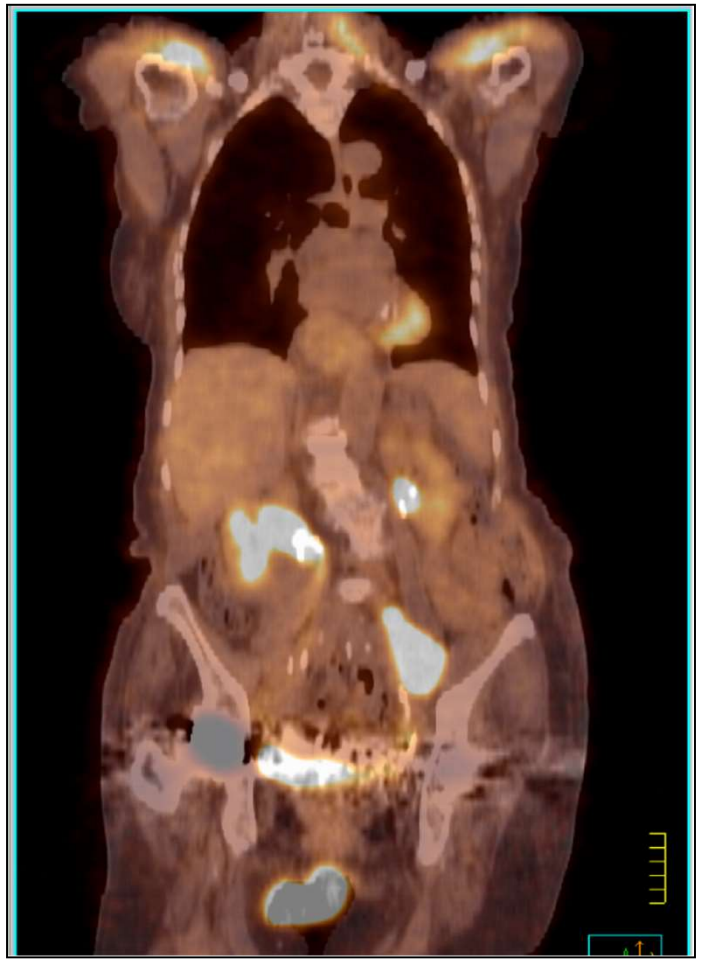
- Examen clinique:
  - Général (abdomen surtout)
  - Vaginal, recto-vaginal (souvent sous narcose)
  - Ganglions inguinaux et sus-claviculaire gauche (ganglion de Troisier)
- Biopsie
- Endoscopies (hystéroscopie, cystoscopie, rectoscopie)
- Imagerie
  - Pyélogramme
  - Rx thorax

Cancer du col:
Staging moderne (“non-FIGO”)

- Radiologie:
  - IRM pelvienne
  - CT thoraco-abdominal
  - PET-CT
- Examens <u>essentiels</u> pour décider de la stratégie, notamment:
  - Chirurgie possible si pas d’ADP
  - Décision RT para-aortique ou non
- Il est rare que le bilan se limite aux examens permis par FIGO, en Suisse en tout cas

Cancer du col:
L’apport de l’IRM et du PET-CT





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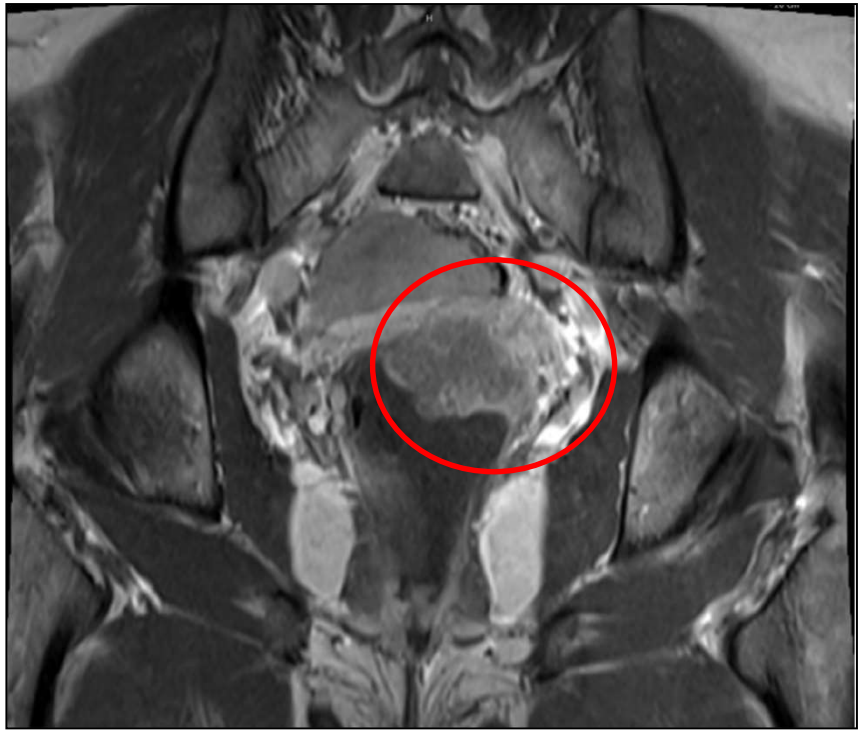

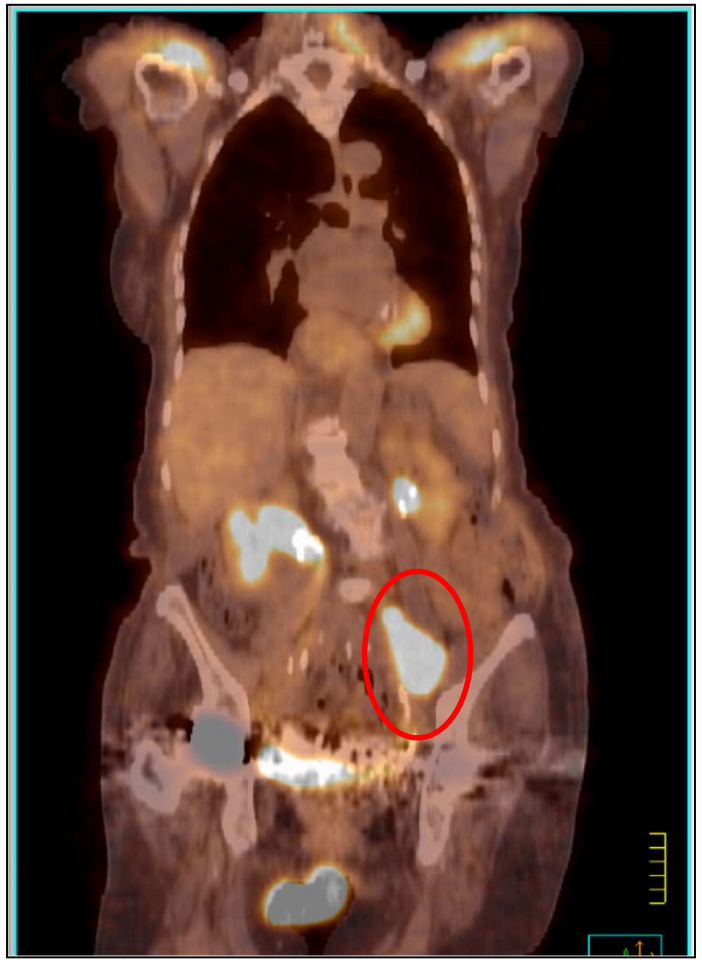

Cancer du col:
L'apport du PET-CT

Table 2 Anatomic distribution of 122 positron emission tomographic-positive lymph nodes in 41 consecutive patients (group 1) with cervical cancer

Lymph node region	No. (%) of positive lymph nodes
Paraortic	9 (7.4)
Common iliac	
	Left 18 (14.8)
	Right 3 (2.5)
External iliac	
	Left 42 (34.4)
	Right 36 (29.5)
Internal iliac	
	Left 4 (3.3)
	Right 4 (3.3)
Presacral	2 (1.6)
Perirectal	2 (1.6)
Medial inguinal (right)	2 (1.6)

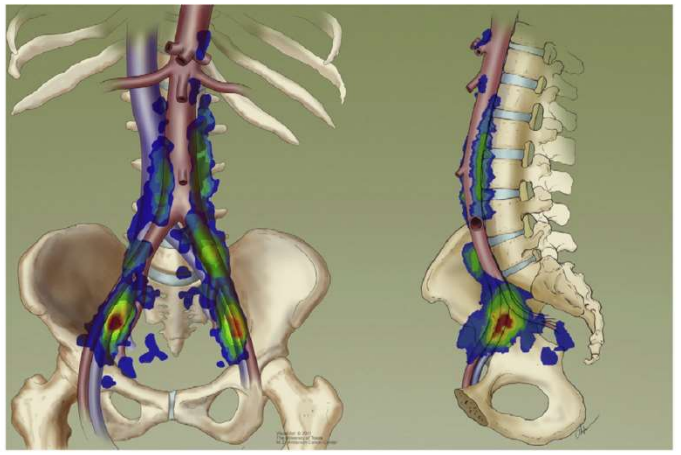

Figure 2 Anatomic distribution of positron emission tomography-positive lymph nodes (LN) based on a volume probability map. A color gradient corresponding to the visible-light spectrum is used to indicate the frequency of LN involvement. (Red, high frequency; green, moderate frequency; blue, low frequency.)

Table 1 Patient and tumor characteristics

Characteristic	All patients (N = 50)	Mean no. of +LNs per patient	Group 1 (consecutively identified) (n = 41)			Group 2 (+PA LNs) (n = 9)		
			No. of patients	No. of +pelvic LNs	No. of +PA LNs	No. of patients	No. of +pelvic	No. of LNs +PA LNs
Disease stage [a]								
IA2	1	1	1	1	0	0	—	—
IB1	1	2	1	1	1	0	—	—
IB2	14	3.0	14	41	1	0	—	—
IIA	4	3.5	4	14	0	0	—	—
IIB	16	5.3	10	25	1	6	35	23
IIIA	0	—	0	—	—	0	—	—
IIIB	11	3.2	10	27	5	1	1	2
IVA	2	2.7	1	4	1	1	0	3
IVB	1	4.0	0	—	—	1	2	2
Totals		3.8	41	113	9	9	38	30

LNs, lymph nodes; +, positive; PA, paraortic; SCC, squamous cell carcinoma.
[a] 2003 International Federation of Gynecology and Obstetrics staging system.

Fontanilla et al, PRO 2013

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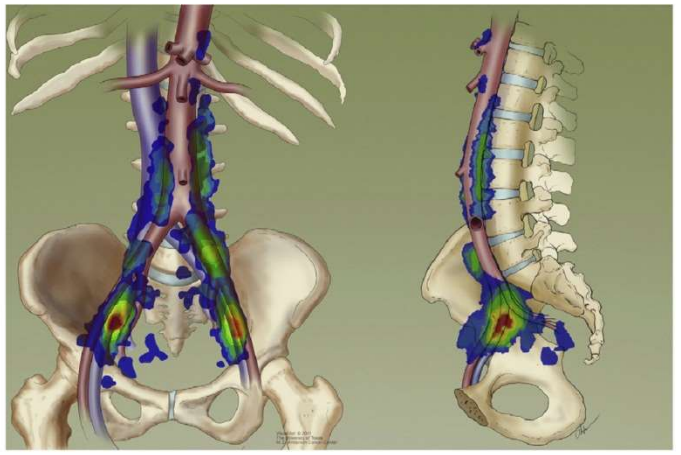

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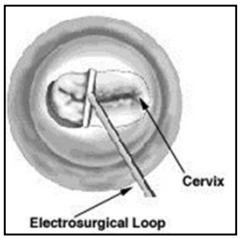
Fontanilla et al, PRO 2013

Cancer du col: Traitement

- Stades précoces (= IA et IB1)
  - IA1 sans invasion lympho-vasculaire
    - «Conisation» si désir de fertilité
    - Hystérectomie «simple» (préserve paramètres et vagin)
  - Toutes les autres:
    - Hystérectomie «radicale» (emporte paramètres et ¼ du vagin) avec curage pelvienne, +/-
    - RT adjuvante
      - Si >4 cm à la patho, invasion lymphovasculaire, atteinte cervicale microscopique («upstaging» pathologique)
    - Radio-chimiothérapie adjuvante
      - Si tranches de section positives, atteinte ganglionnaire pelvienne ou atteinte des paramètres (upstaging idem)



Cancer du col: Traitement

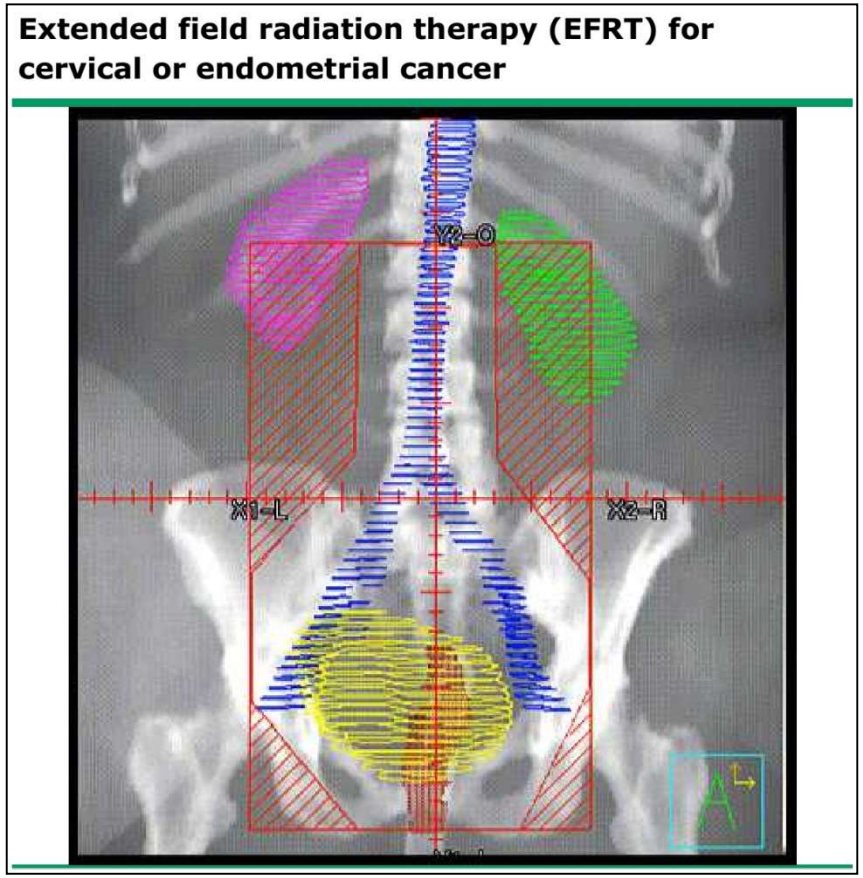
- Stades avancés (IIB2 à IVA)
  - Radiochimiothérapie
  - RT externe + curiethérapie
  - Cisplatine hebdomadaire concomitante
  - Cave prise en charge au préalable de toute obstruction urétérale (toxicité rénale du cisplatine)
  - Alternative au cisplatine = carboplatine si patiente fragile ou insuffisance rénale persistante

Cancer du col: Radiothérapie

- RT externe
  - Pelvienne à minima
  - Parfois para-aortique (EFRT = «extended-field RT»)
  - Décision de l'étendue en fonction des résultats du PET-CT
- Curiethérapie
  - Composante essentielle du ttt!
  - Revue SEER 2013:
    - Meilleurs résultats (survie) chez patientes ayant eu de la curiethérapie comme partie de leur traitement
    - Mais diminution du taux d'utilisation de 83% en 1998 à 58% en 2009
    - Des compétences en voie de disparition?

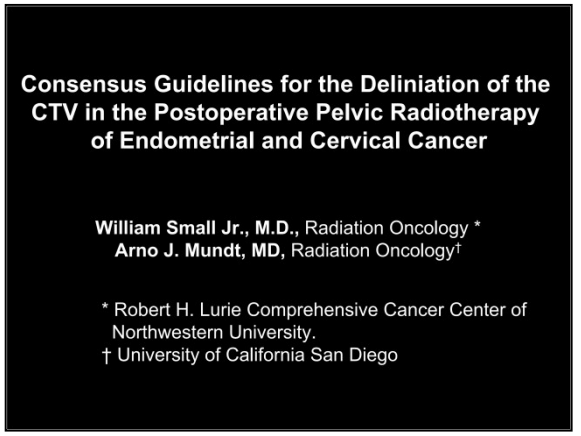
Cancer du col:
RT externe

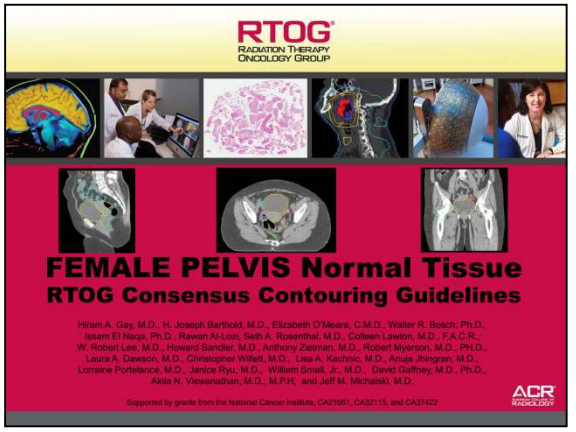
- IMRT en principe (VMAT, tomothérapie, etc)
- Fractionnement typique
  - 45-50 Gy en 25-28 fractions
  - Eventuellement avec un boost de 10-15 Gy au niveau paramètres ou ADP positives
  - Cavé toxicité potentielle (tolérance grêle = env 50 Gy en Dmax)



Cancer du col:
RT externe

- Volumes cibles:
  - Col/tumeur
  - Utérus
  - Vagin
  - Paramètres
  - Aires ganglionnaires pelviennes ilio-obturateurs et/ou para-aortiques (+ inguinaux si atteinte bas du vagin)
- Contouring guidelines, par ex. de la RTOG





Cancer du col:
Toxicité de la EFRT réduite par IMRT

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Original Report

Extended field intensity modulated radiation therapy for gynecologic cancers: Is the risk of duodenal toxicity high?

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Received 3 September 2014; revised 24 October 2014; accepted 29 October 2014

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Toxicité de la EFRT réduite par IMRT

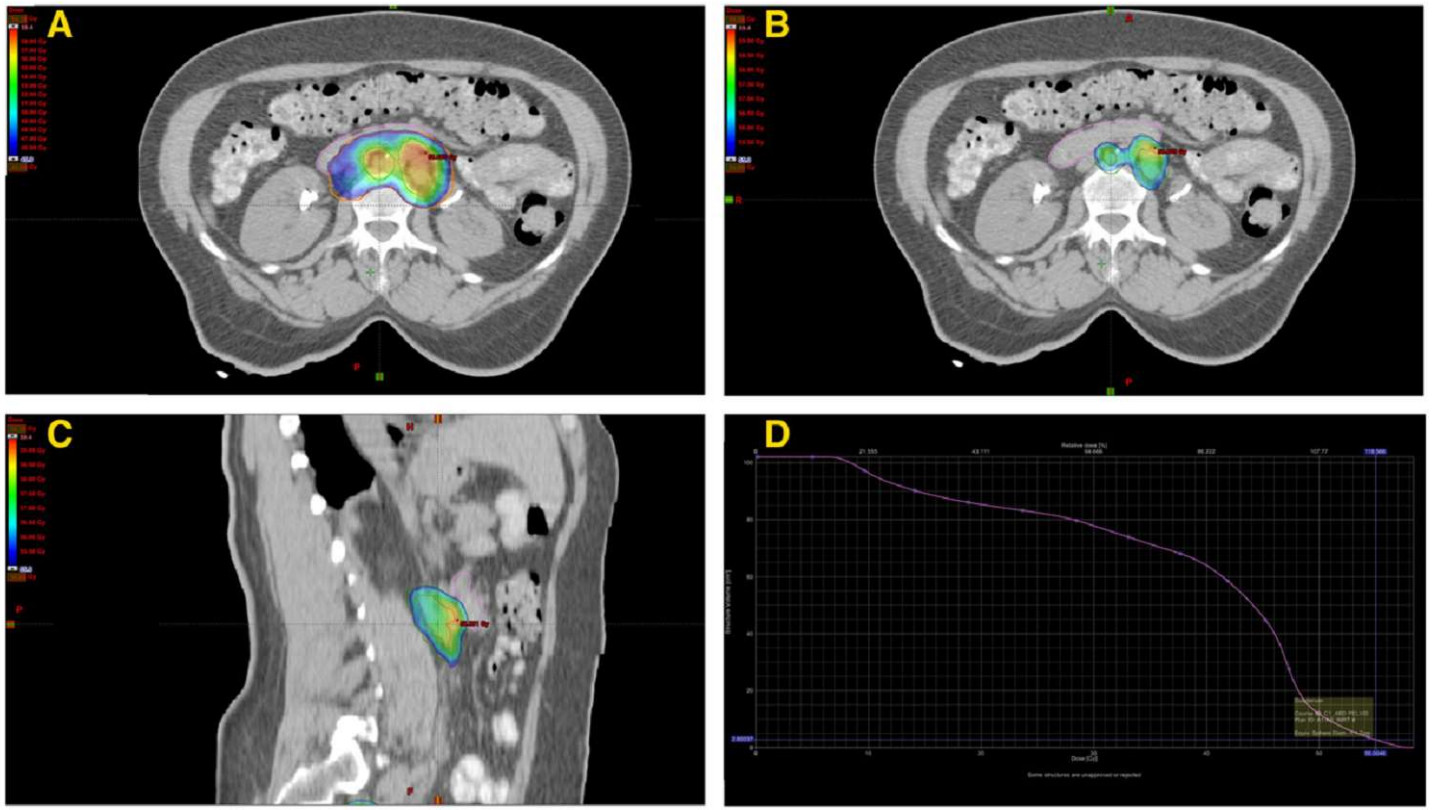


Figure 1 Treatment plan. (A) axial image at the level of the renal hila, 45-Gy isodose; (B) axial image at the level of the renal hila, 55-Gy isodose; (C) sagittal image showing a 55-Gy isodose in proximity to the duodenum; (D) dose-volume histogram (DVH) showing V55 Gy = 2.8 mL.

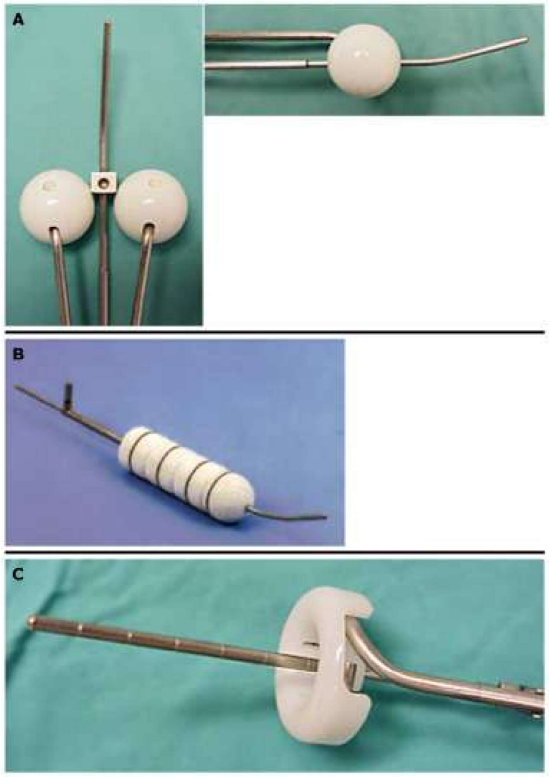
Xu et al, PRO 2015

Cancer du col:
Curiethérapie

- Intracavitaire ou interstitielle (si atteinte vaginale importante)
- Insertion sous anésthésie
- LDR/PDR/HDR
- LDR
  - Une ou deux fractions vers la fin de la RT externe
- HDR
  - Typiquement 3 à 6 fractions
  - Fractionnements typiques:
    - 5 x 5,25 Gy si avec chimio
    - 5 x 6 Gy si RT seule

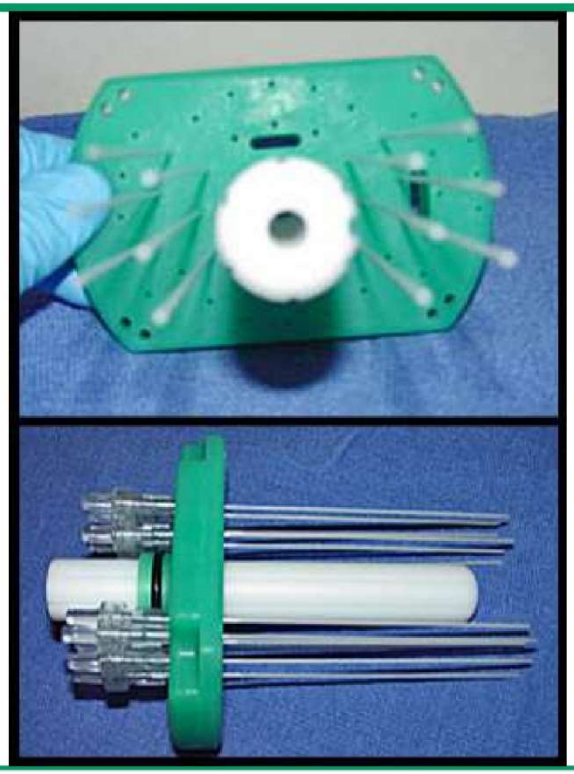
Cancer du col: Curiethérapie

High dose rate (HDR) cervix brachytherapy applicators



Intrauterine tandem with (A) vaginal ovoids, with (B) vaginal cylinders, or with a (C) vaginal ring.

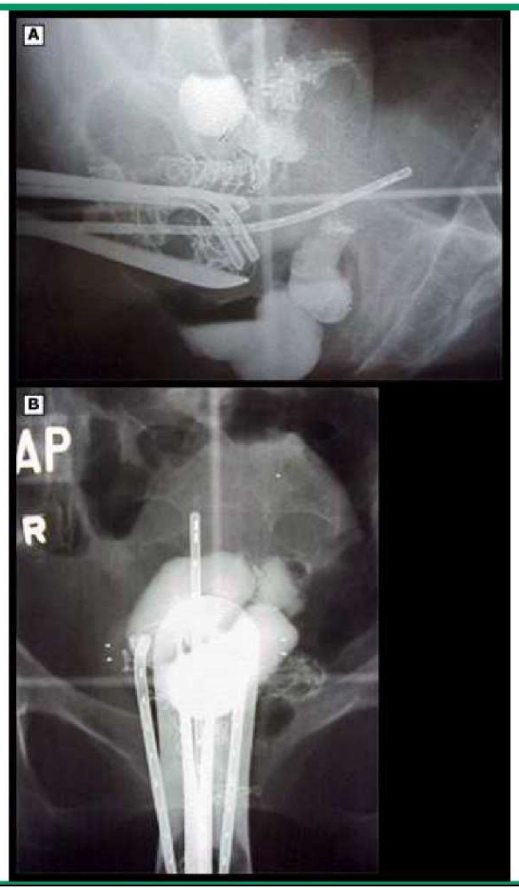
Cervical interstitial brachytherapy



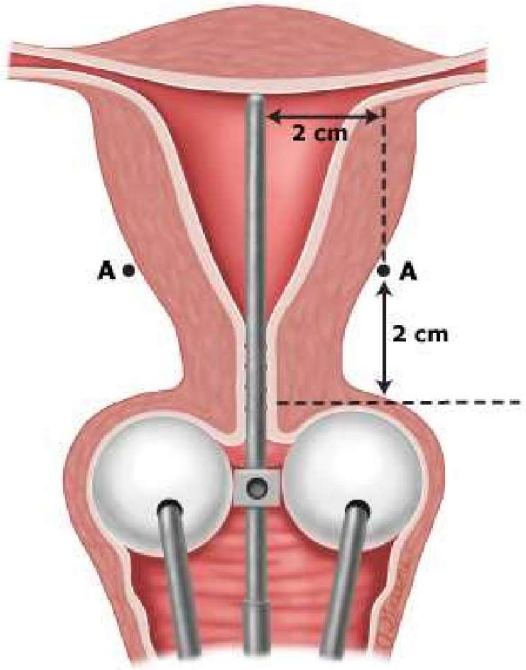
Syed-type interstitial implant used for cervical brachytherapy.

Cancer du col:
Curiethérapie «classique»

High dose rate (HDR) cervical brachytherapy planning

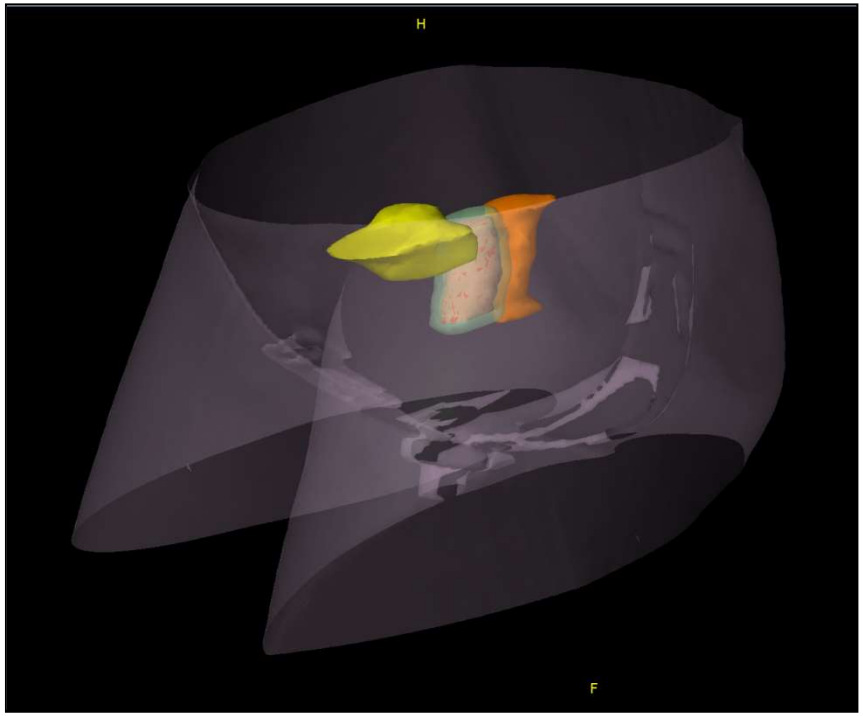


Brachytherapy reference points



Tandem and ovoid cervical brachytherapy illustration of point A.

Cancer du col:
Curiethérapie en évolution



Cancer du col:
Importance de la curiethérapie

Practical Radiation Oncology (2015) **5**, 56-61

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Original Report

Patterns of care and brachytherapy boost utilization for vaginal cancer in the United States

Malolan S. Rajagopalan MD [a], Karen M. Xu BS [a], Jeff Lin MD [b], Karyn Hansen MD [b], Paniti Sukumvanich MD [b], Thomas C. Krivak MD [b], Joseph L. Kelley MD [b], Sushil Beriwal MD [a,*]

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Importance de la curiethérapie

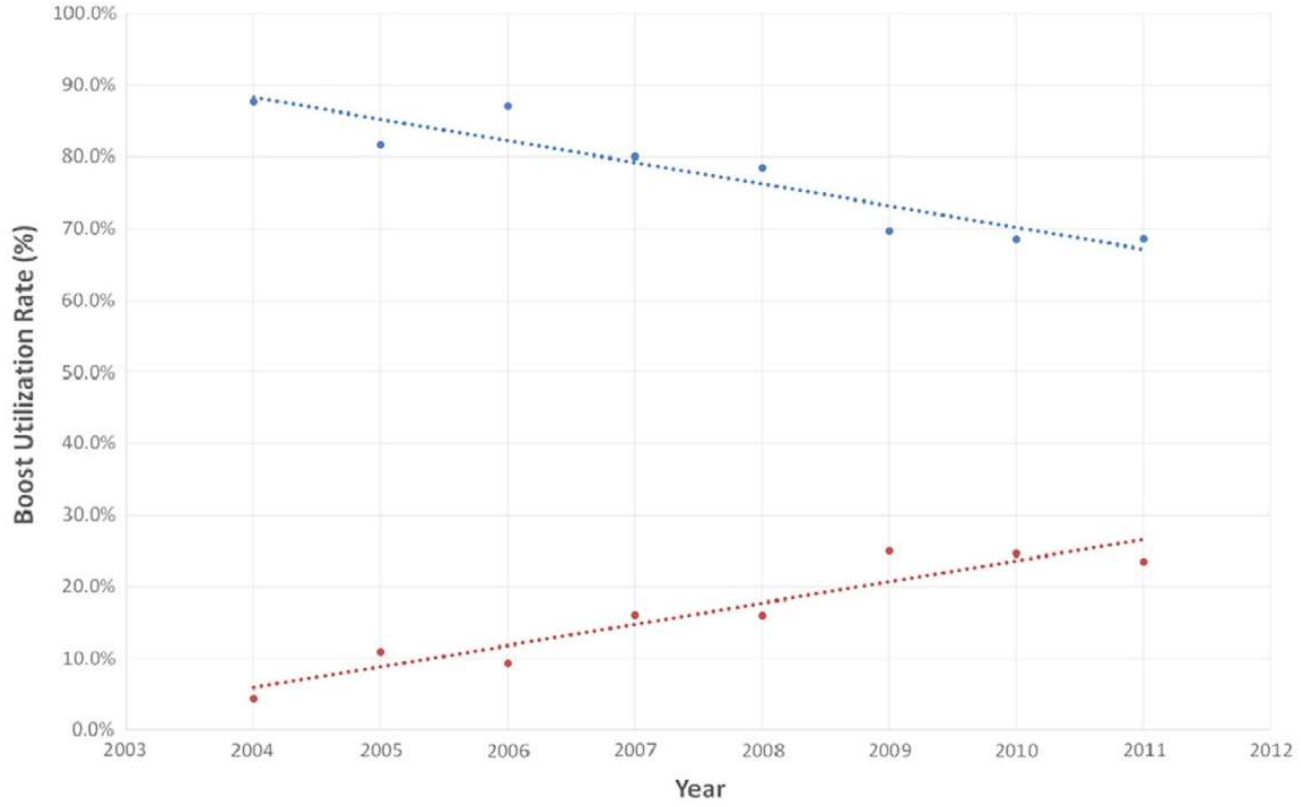


Figure 1 Changes in radiation boost technique over time for vaginal cancer. The percentage of radiation boost therapy delivered using brachytherapy (blue) and intensity modulated radiation therapy (IMRT; red) technique are shown. From 2004 to 2001 there is a 19.1% decrease in brachytherapy boost utilization and a 19.0% increase in IMRT boost utilization. (For color version, see online at www.practicalradonc.org).

Rajagopalan et al, PRO 2015

Cancer du col:
Importance de la curiethérapie

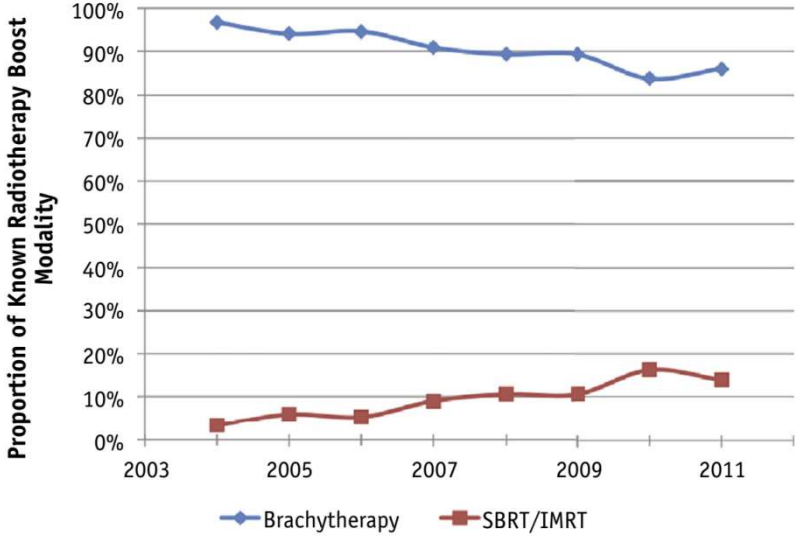
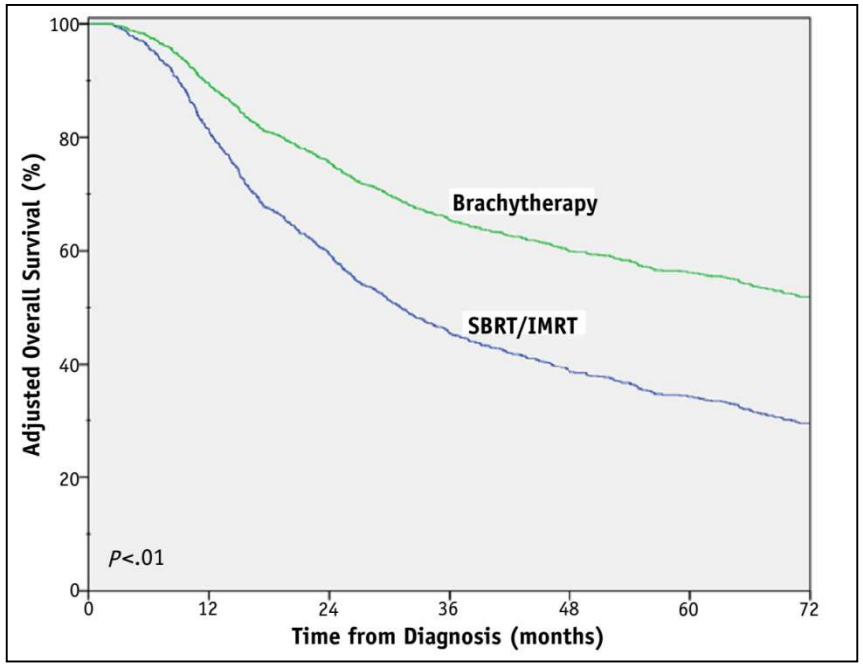


Fig. 1. Changes in radiation therapy boost modality utilization over time from 2004 to 2011. IMRT = intensity modulated radiation therapy; SBRT = stereotactic body radiation therapy.



Gill et al, IJROBP 2014

Cancer du col:
Importance de la curiethérapie

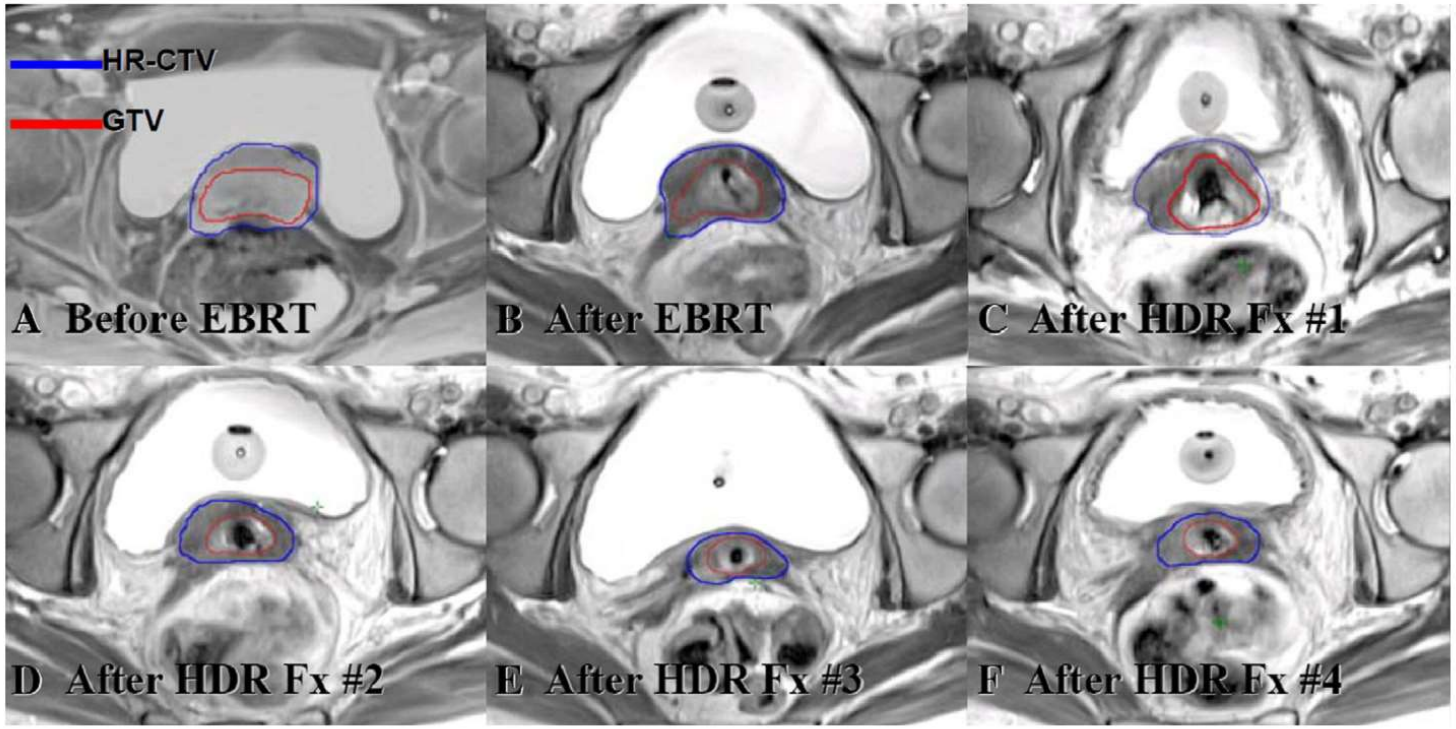


Figure 1 The T2-weighted magnetic resonance imaging data sets for 1 patient showing gross target volume (GTV) and high-risk clinical target volume (HR-CTV) (A) before external beam radiation therapy (EBRT), (B) regression after EBRT, and (B)-(F) after each brachytherapy fraction of high-dose-rate (HDR). (A) 1.5 Tesla MRI images were used for EBRT planning and (B)-(F) 3.0 Tesla MRI images were used for HDR planning.

Sun et al, PRO 2012

Cancer du col:
Importance de la curiethérapie

International Journal of
Radiation Oncology
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EDITORIAL

Curative Radiation Therapy for Locally Advanced Cervical Cancer: Brachytherapy Is NOT Optional

Kari Tanderup, PhD,*,† Patricia J. Eifel, MD,‡ Catheryn M. Yashar, MD,§ Richard Pötter, MD,‖ and Perry W. Grigsby, MD*

**Department of Radiation Oncology, Washington University School of Medicine, St. Louis, Missouri; †Department of Oncology, Aarhus University Hospital, Aarhus, Denmark; ‡Department of Radiation Oncology, The University of Texas MD Anderson Cancer Center, Houston, Texas; §Department of Radiation Oncology, University of California, San Diego, La Jolla, California; and ‖Department of Radiotherapy and Oncology, Comprehensive Cancer Center and Christian Doppler Laboratory for Medical Radiation Research for Radiation Oncology, Medical University of Vienna, Vienna, Austria*

Received Nov 5, 2013. Accepted for publication Nov 6, 2013.

Cancer du col:
Guidelines et réalité

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Clinical Investigation

Trends in the Quality of Treatment for Patients With Intact Cervical Cancer in the United States, 1999 Through 2011

Grace L. Smith, MD, PhD,[*,†] Jing Jiang, PhD,[†] Sharon H. Giordano, MD, MPH,[‡] Larissa A. Meyer, MD, MPH,[†,§] and Patricia J. Eifel, MD[*]

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Smith et al, IJROBP 2015

Cancer du col:
Guidelines et réalité

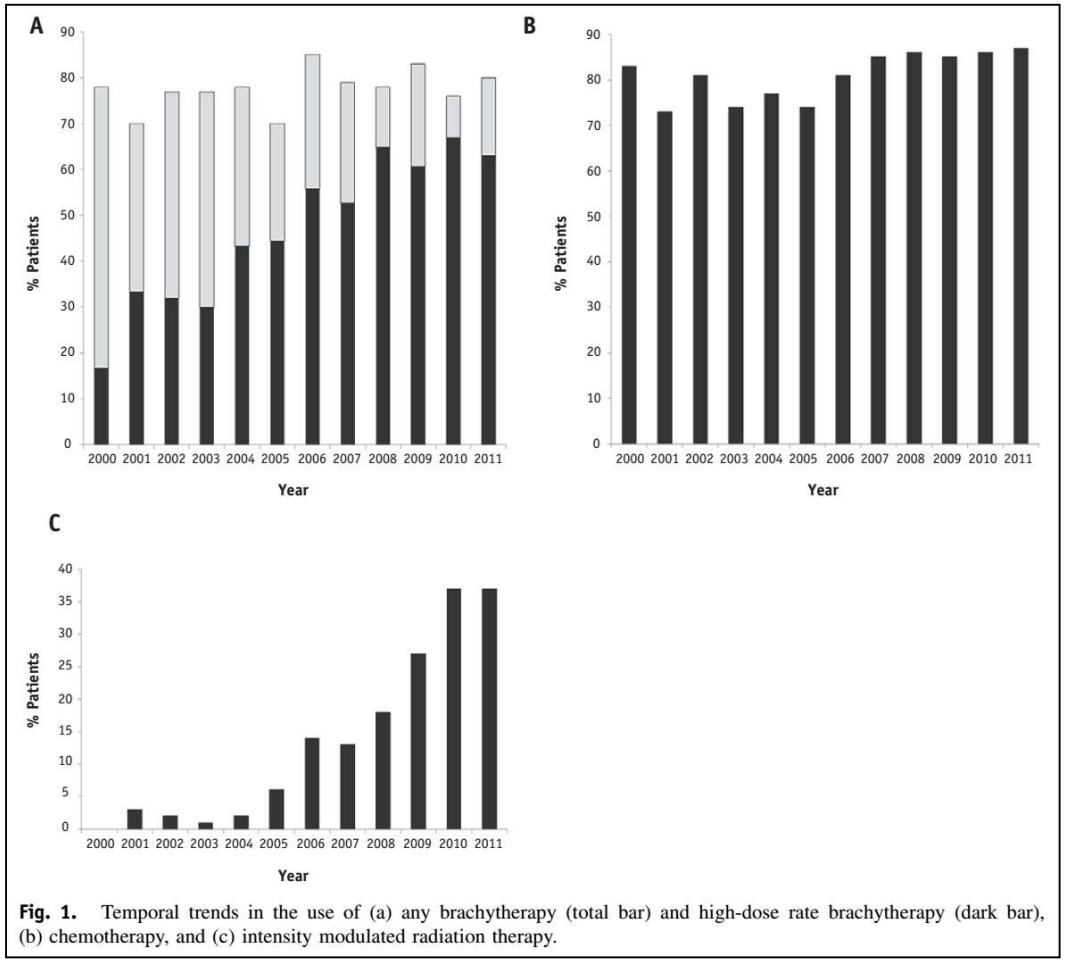
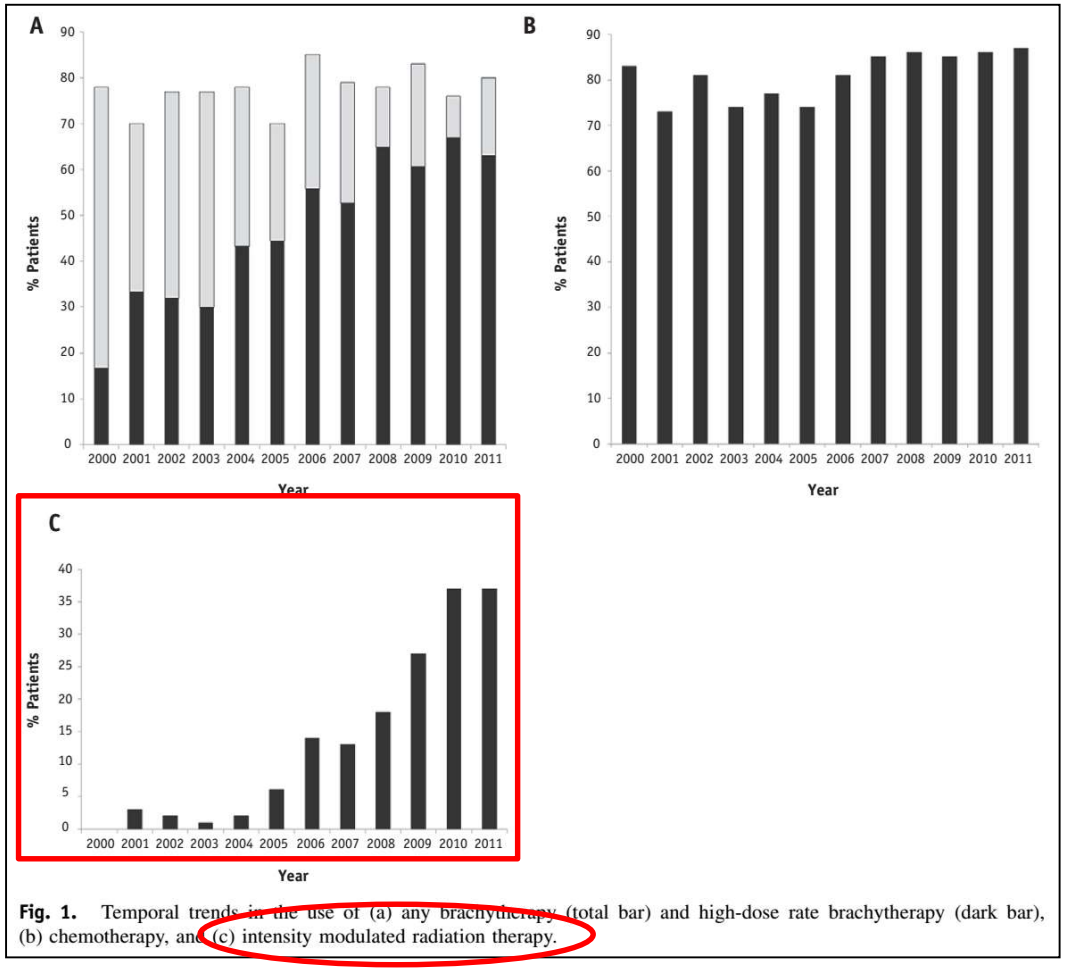


Fig. 1. Temporal trends in the use of (a) any brachytherapy (total bar) and high-dose rate brachytherapy (dark bar), (b) chemotherapy, and (c) intensity modulated radiation therapy.

Smith et al, IJROBP 2015

Cancer du col:
Guidelines et réalité



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Smith et al, IJROBP 2015

Cancer du col:
Guidelines et réalité

Summary

We benchmarked 3 measures of quality treatment for intact cervical cancer by analyzing national health insurance claims data. In 1508 patients treated from 1999 to 2011, only 44% received treatment that met all 3 quality benchmarks: delivery of brachytherapy (received by 78% of patients), delivery of concurrent chemotherapy (received by 79% of patients), and radiation treatment duration not exceeding 63 days (achieved in 64% of patients).

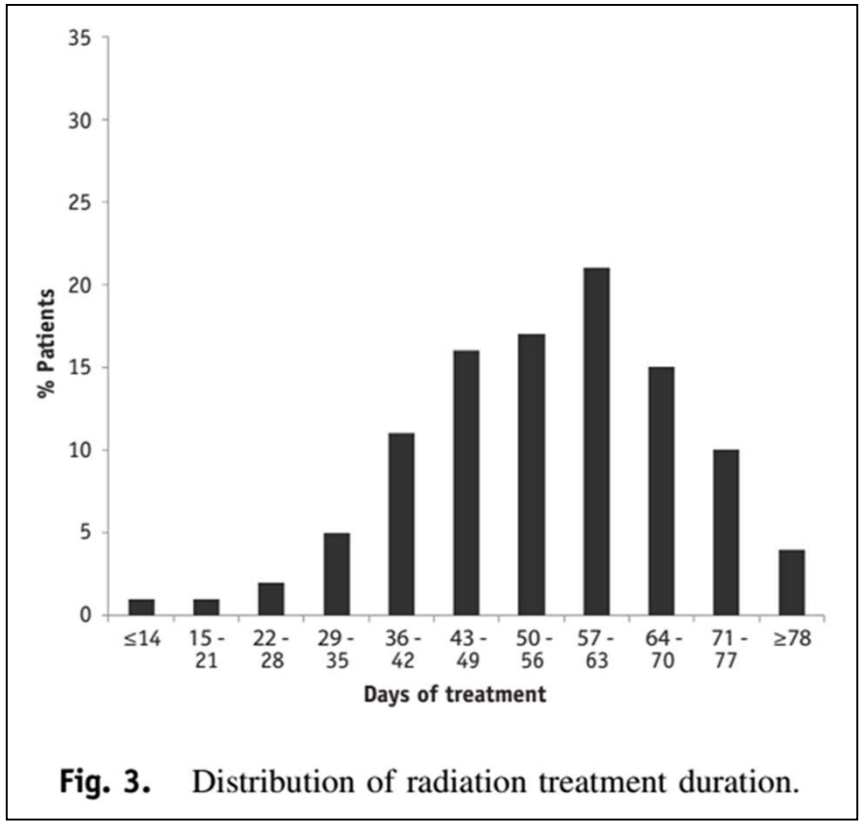

Fig. 3. Distribution of radiation treatment duration.

Smith et al, IJROBP 2015

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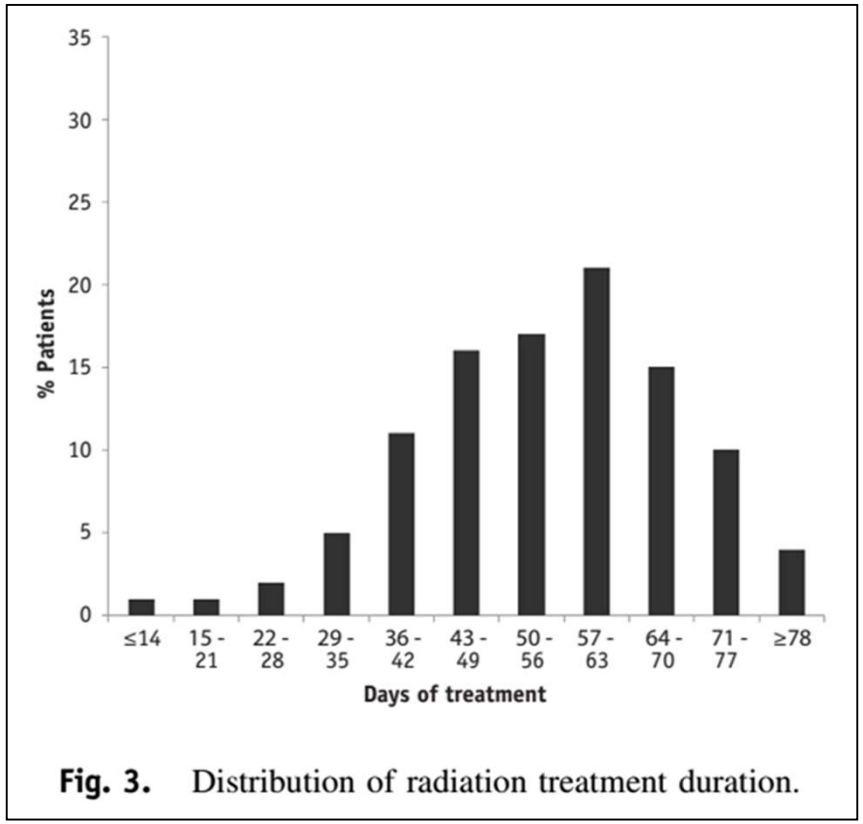

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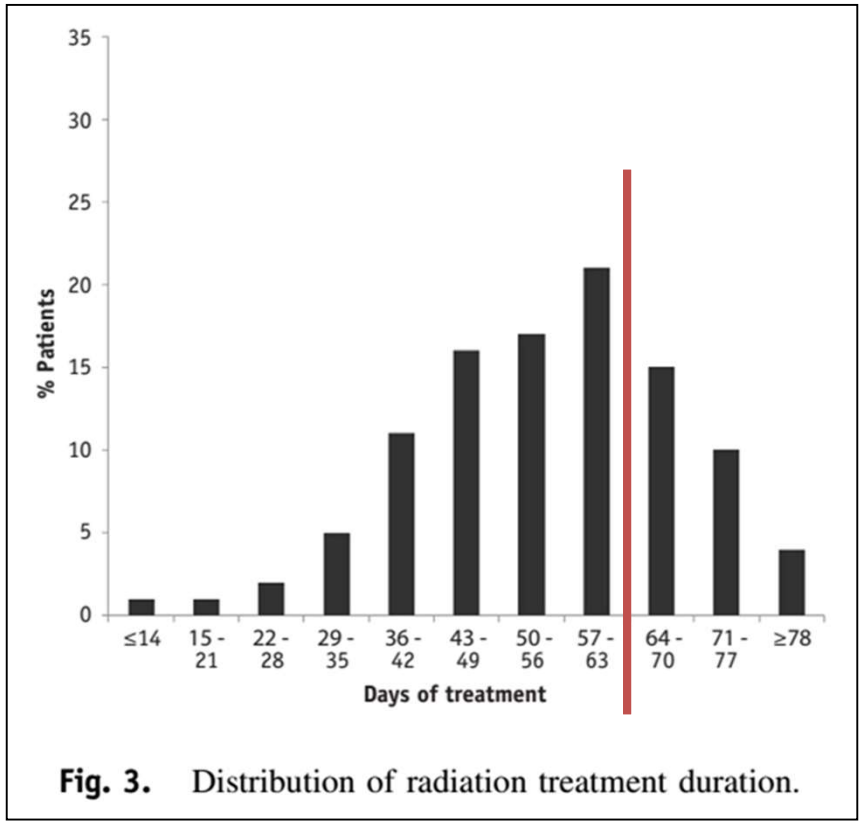

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Smith et al, IJROBP 2015

Plan

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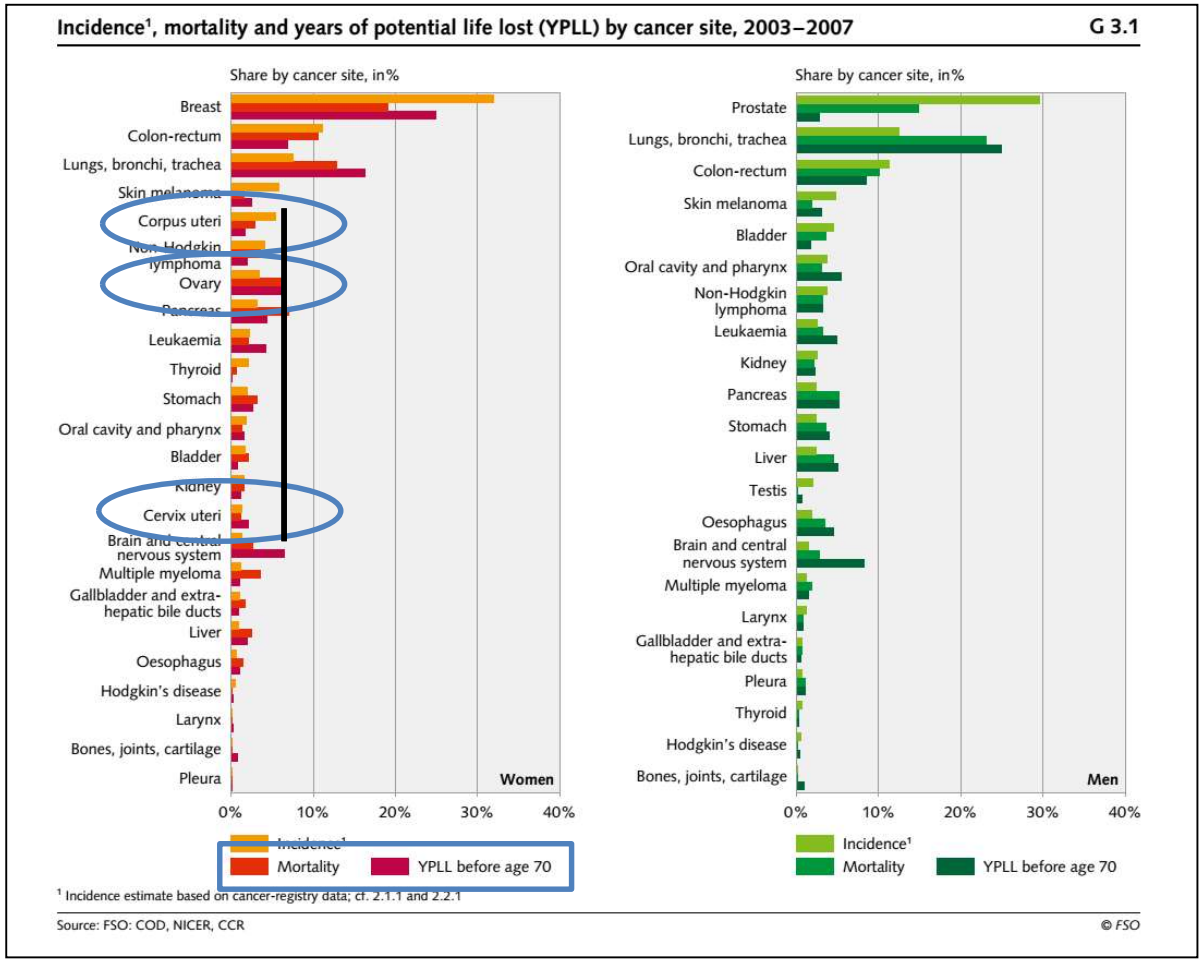
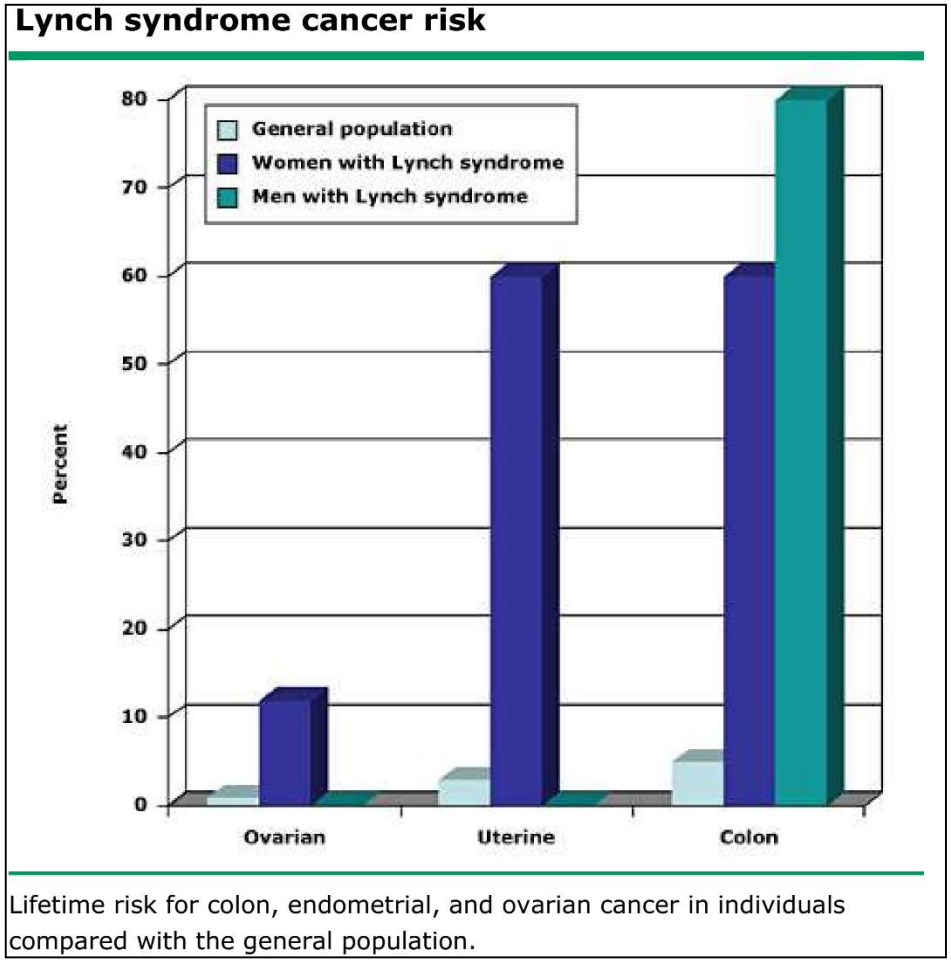
Cancer de l'ovaire

- 1ère cause de décès parmi les cancers gynécologiques dans les pays industrialisés
- Aux USA
  - Environ 22'000 nouveaux cas/année
  - Environ 14'000 décès
  - Age moyen au diagnostic = 63 ans
- Tumeurs ovaire/trompes/péritoine classées ensemble
- Dans 10 à 15% des cas, associé avec une prédisposition génétique familiale (mutation BRCA ou syndrome de Lynch)

En Suisse: incidence

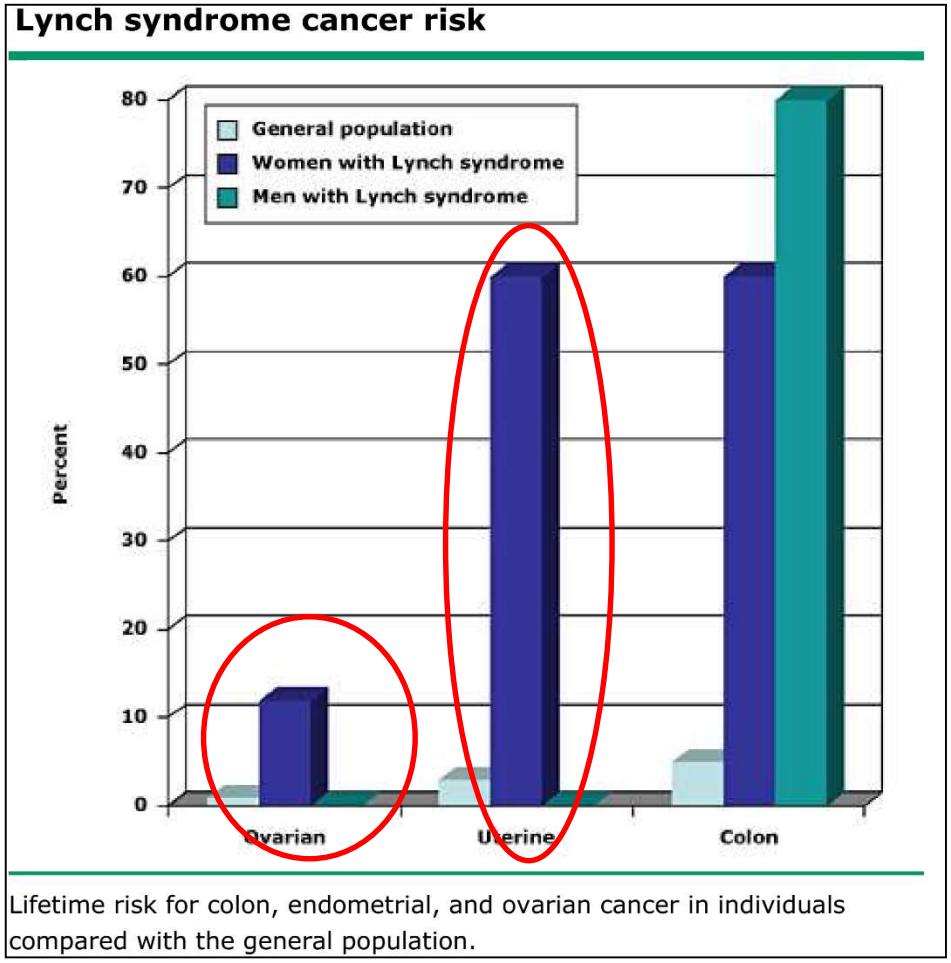


Cancer de l'ovaire
Syndromes génétiques



Lifetime risk for colon, endometrial, and ovarian cancer in individuals compared with the general population.

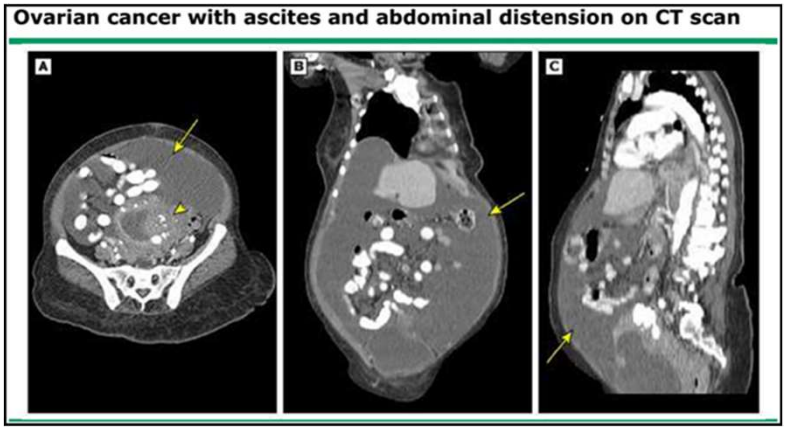
Cancer de l’ovaire
Syndromes génétiques



Lifetime risk for colon, endometrial, and ovarian cancer in individuals compared with the general population.

Cancer de l’ovaire

- Au diagnostic
  - Métastatique à distance dans environ 60%
  - Dissémination ganglionnaire dans environ 20%
  - Limitée au site primaire dans seulement 15% environ



Cancer de l’ovaire

- «The silent killer»
  - Pas de présentation clinique spécifique
  - Gêne abdominale
  - Gêne urinaire (fréquence, urgences)
  - Perte d’appétit
  - Nausées, ascite, perte de poids dans des cas avancés

Cancer de l'ovaire: Symptômes aspécifiques

Ovarian cancer symptoms consensus statement

Historically, ovarian cancer was called the "silent killer" because symptoms were not thought to develop until the chance of cure was poor. However, studies have shown that this term is untrue and that the following symptoms are much more likely to occur in women with ovarian cancer than in women in the general population. **These symptoms include**[1,2]:

- Bloating
- Pelvic or abdominal pain
- Difficulty eating or feeling full quickly
- Urinary symptoms (urgency or frequency)

Women with ovarian cancer report that symptoms are persistent and represent a change from normal for their bodies. The frequency and/or number of such symptoms are key factors in the diagnosis of ovarian cancer[3]. Several studies show that even early stage ovarian cancer can produce these symptoms[2-6].

Women who have these symptoms almost daily for more than a few weeks should see their doctor, preferably a gynecologist. Prompt medical evaluation may lead to detection at the earliest possible stage of the disease. Early stage diagnosis is associated with an improved prognosis.

Several other symptoms have been commonly reported by women with ovarian cancer[2-5]. These symptoms include fatigue, indigestion, back pain, pain with intercourse, constipation, and menstrual irregularities. However, these other symptoms are not as useful in identifying ovarian cancer, because they are also found in equal frequency in women in the general population who do not have ovarian cancer[1].

Cancer de l'ovaire: Symptômes aspécifiques

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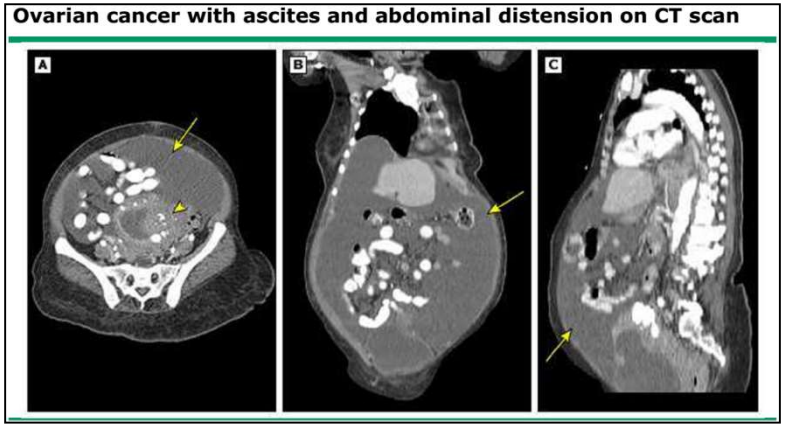
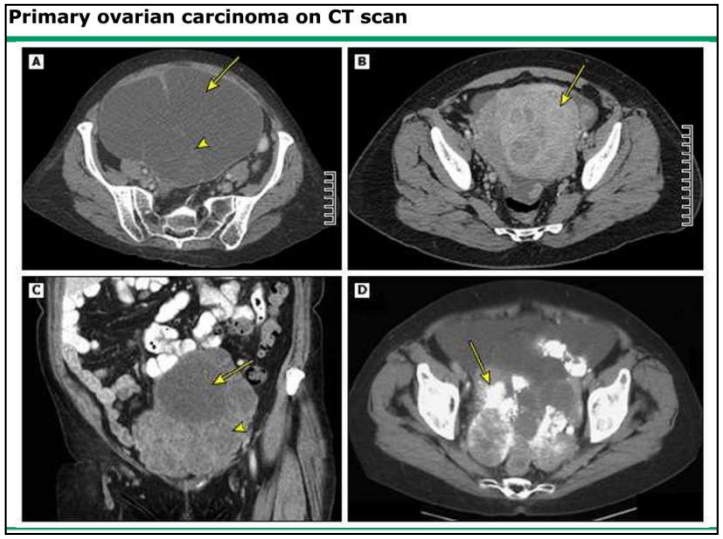
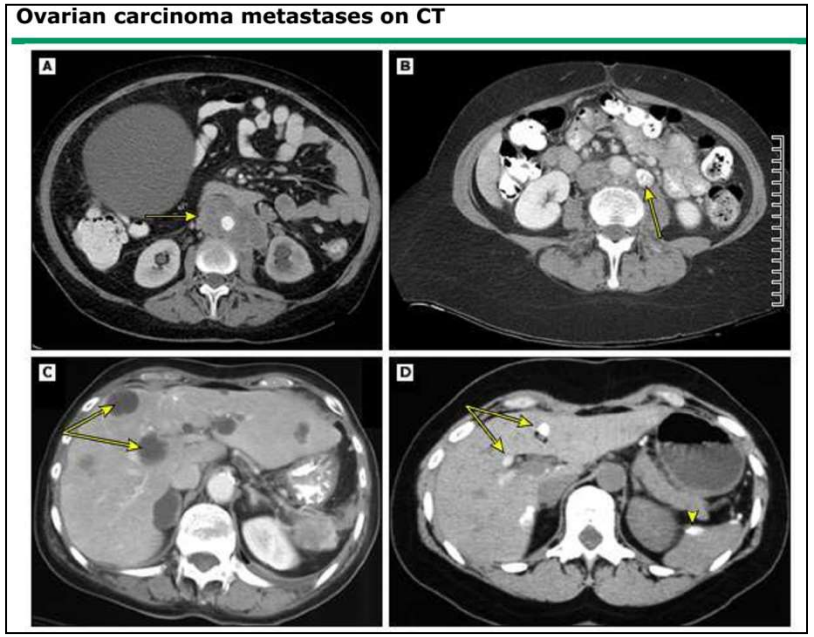
Cancer de l’ovaire:
Présentations radiologiques





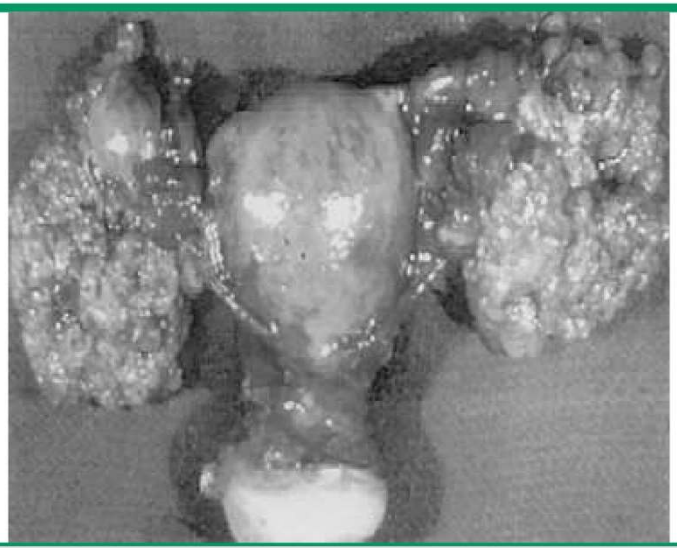


Cancer de l'ovaire: Prise en charge

- Même en situation métastatique
  - Chirurgie abdominale extensive («debulking»)
    - Vise à ne laisser en place aucune maladie visible si possible
    - Pronostic inférieur pour des résidus tumoraux > 1 cm
  - Chimiothérapie (carboplatine/paclitaxel)
  - Parfois chirurgie de «second look» si résection suboptimale
  - Alternativement, chimiothérapie néoadjuvante, puis chirurgie

Cancer de l'ovaire:
Dissémination intra-abdominale

Uterus with bilateral ovarian malignancies

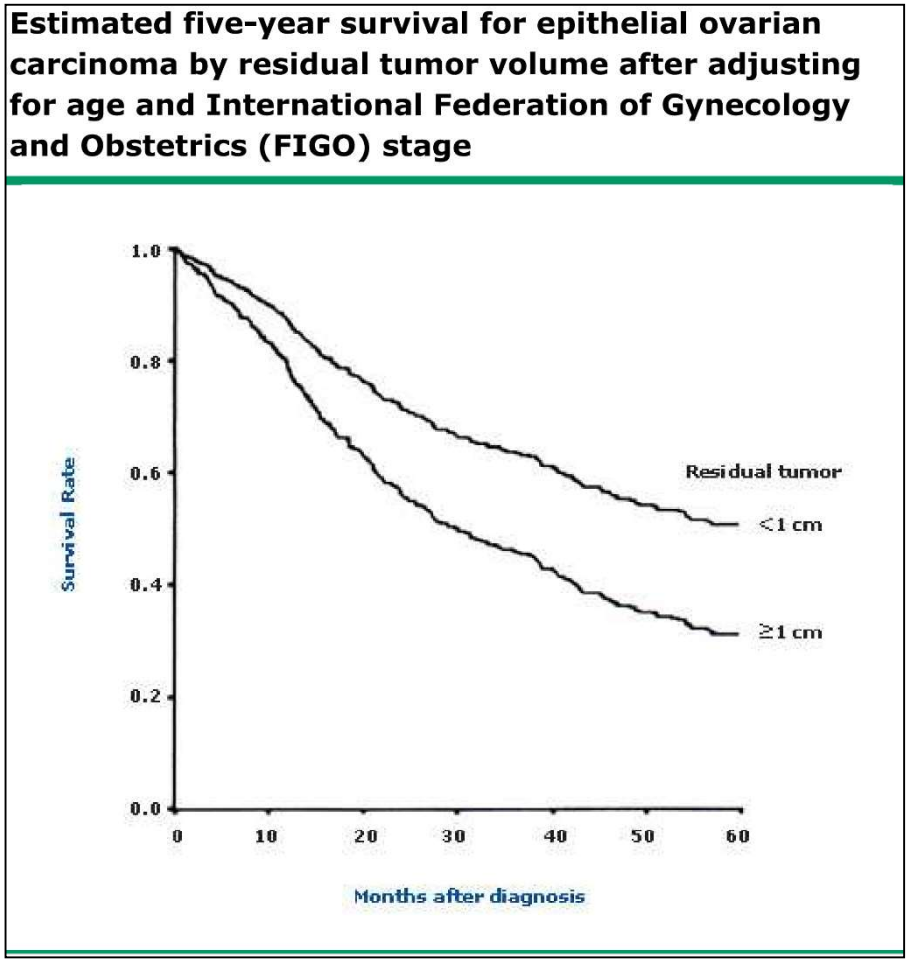


Ovarian cancer metastatic to the omentum

Large omental cake (C) overlying small bowel.

Cancer de l'ovaire:
Importance de la chirurgie réductive

Estimated five-year survival for epithelial ovarian carcinoma by residual tumor volume after adjusting for age and International Federation of Gynecology and Obstetrics (FIGO) stage



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Cancer du vagin

- Métastases > tumeurs primaires
- Touche 1 femme sur 100’000 environ
- Aux USA, 4000 cas et 900 décès par année
- Pas de statistiques suisses (personnellement du jamais vu)
- Age moyen au diagnostic = environ 60 ans
- HPV probablement causal dans la majorité des cas

Cancer du vagin

- Carcinomes épidermoïdes pour la plupart
- Pronostic moyen
- Traitement
  - Aucune étude randomisée
  - Chirurgie si petite tumeur (2 cm) dans le bas du vagin
  - Sinon RT seule ou radio-chimiothérapie (EBRT + curiettt), par analogie à la prise en charge des carcinomes de l'anus et du col

Cancer de la vulve

- 4e au rang des tumeurs gynécologiques, environ 5% des cas
- USA 1997-2004
  - 2.5 cas/100’000 femmes par année
  - Environ 4900 cas par année, et 1000 décès
  - Age moyen au dg = 65 ans
- Deux voies causales postulées
  - HPV
  - Inflammation chronique (lichen)

Cancer de la vulve

- Présentation typique = prurit vulvaire (démangeaisons)
- 90% carcinomes épidermoïdes
- Autres histologies rares, par ex mélanomes
- Traitement
  - Chirurgie du primaire si possible
  - Lymphadenectomie inguinale
  - Une des rares pathologies pour lesquelles le principe du ganglion sentinelle est validé (autres: cancer du sein, mélanome)
  - RT ou radio-chimiothérapie adjuvante ou exclusive

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Cancers gynécologiques: Toxicités de la RT

- Aiguës
  - Cystite
  - Diarrhées, nausées (EFRT, cisplatine)
  - Mucite vaginale
  - Nécrose/ulcération vaginale (si curiethérapie interstitielle)
  - Toxicité hématologique (25% de la moelle hématopoiétique dans le pelvis)
- Chroniques
  - Urgences ou incontinence urinaires
  - Diarrhées, malabsorption, douleurs, obstruction, ulcérations
  - Sténose/sécheresse vaginale
    - Dyspareunie, dilatateurs (?)
  - Ménopause précoce
    - Systématique pour > 6 Gy si > 40 ans
    - Intérêt de la transposition des ovaires chez les ptes jeunes
  - Fractures pelviennes

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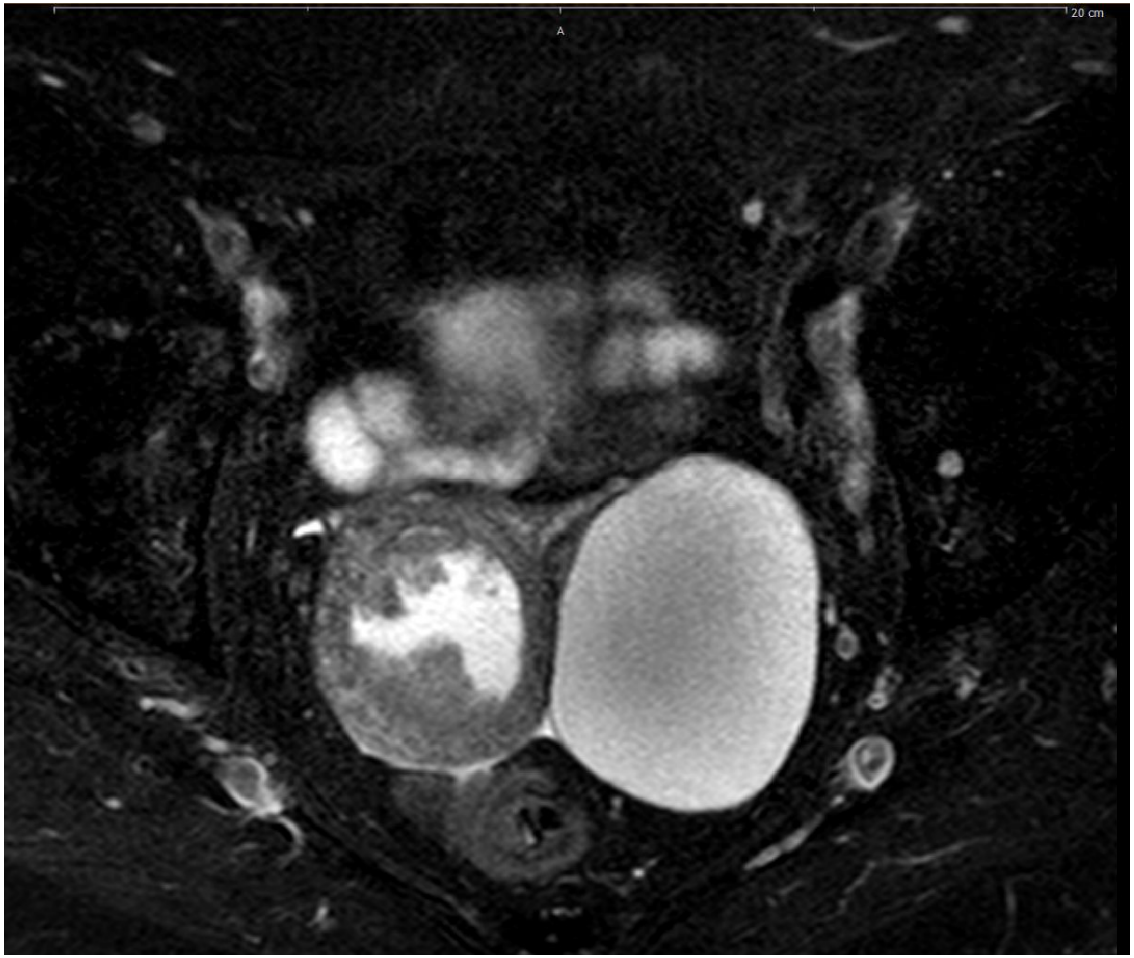
Cas clinique 1

- Pte de 80 ans avec des métrorragies
- Biopsie: adénocarcinome séreux papillaire (grade 3)
- IRM pelvienne: image d'hématomètre du col utérin, fortement suspecte d'une lésion néoplasique sous-jacente
- CT thoraco-abdominal: pas de signe de dissémination ganglionnaire régionale ou métastatique à distance

Cas clinique 1



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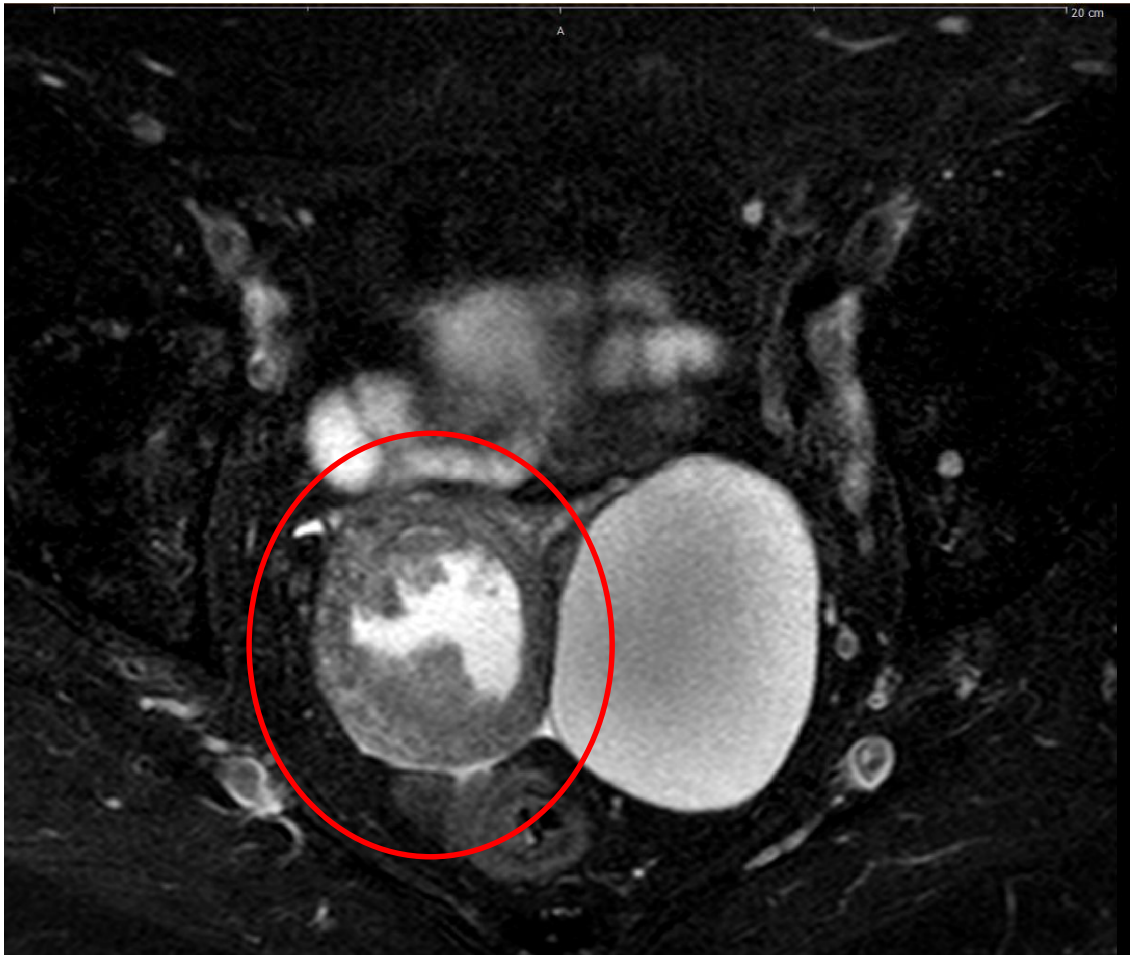


Cas clinique 1

- Hystérectomie totale abdominale et annexectomie bilatérale
- Stade pathologique pT2
  - Infiltration focale du stroma cervical
  - Infiltration de < 50% de l'épaisseur du myomètre
- Pas de staging ganglionnaire: « unstaged »

Cancer de l'endomètre: Traitements adjuvants (rappel)

- High-risk
  - Sereux stade IA sans atteinte myomètre
    - Curiethérapie endovaginale seule
  - Sereux stades IA-B et II
    - Chimiothérapie + curiethérapie endovaginale
  - Cellules claire stades I-II
    - Curiethérapie endovaginale seule
  - Stade III toutes histologies
    - Chimiothérapie +/- RT (pelvienne + curiettt recommandée dans les guidelines ASTRO 2014, mais pas une attitude universelle)

Cancer de l'endomètre: Traitements adjuvants (rappel)

- High-risk
  - Sereux stade IA sans atteinte myomètre
    - Curiethérapie endovaginale seule
  - Sereux stades IA-B et II
    - Chimiothérapie + curiethérapie endovaginale
  - Cellules claire stades I-II
    - Curiethérapie endovaginale seule
  - Stade III toutes histologies
    - Chimiothérapie +/- RT (pelvienne + curiettt recommandée dans les guidelines ASTRO 2014, mais pas une attitude universelle)

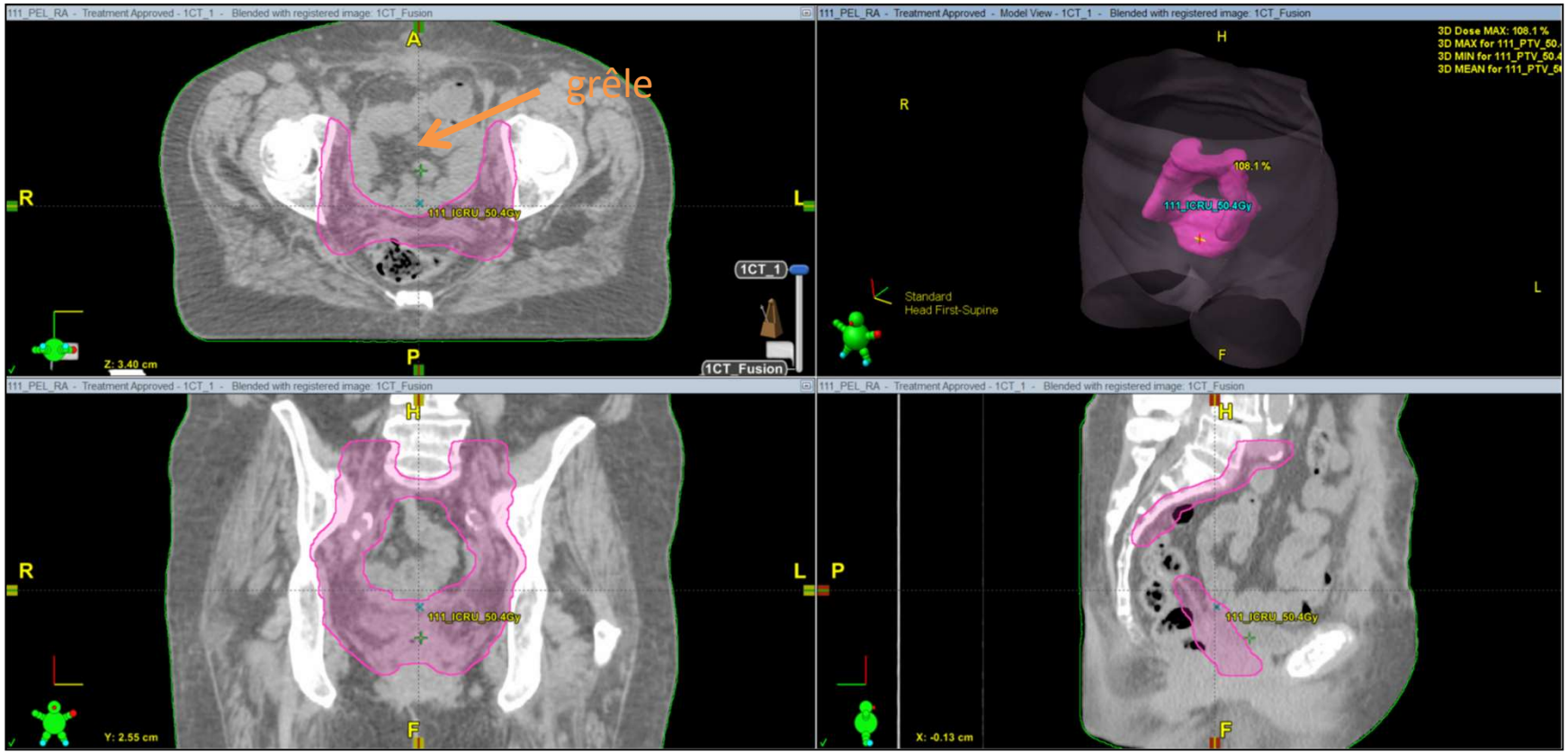
Cancer de l'endomètre: Traitements adjuvants (rappel)

- High-risk
  - Sereux stade IA sans atteinte myomètre
    - Curiethérapie endovaginale seule
  - Sereux stades IA-B et II ? mais pas de staging ganglionnaire
    - Chimiothérapie + curiethérapie endovaginale
  - Cellules claire stades I-II
    - Curiethérapie endovaginale seule
  - Stade III toutes histologies
    - Chimiothérapie +/- RT (pelvienne + curiettt recommandée dans les guidelines ASTRO 2014, mais pas une attitude universelle)

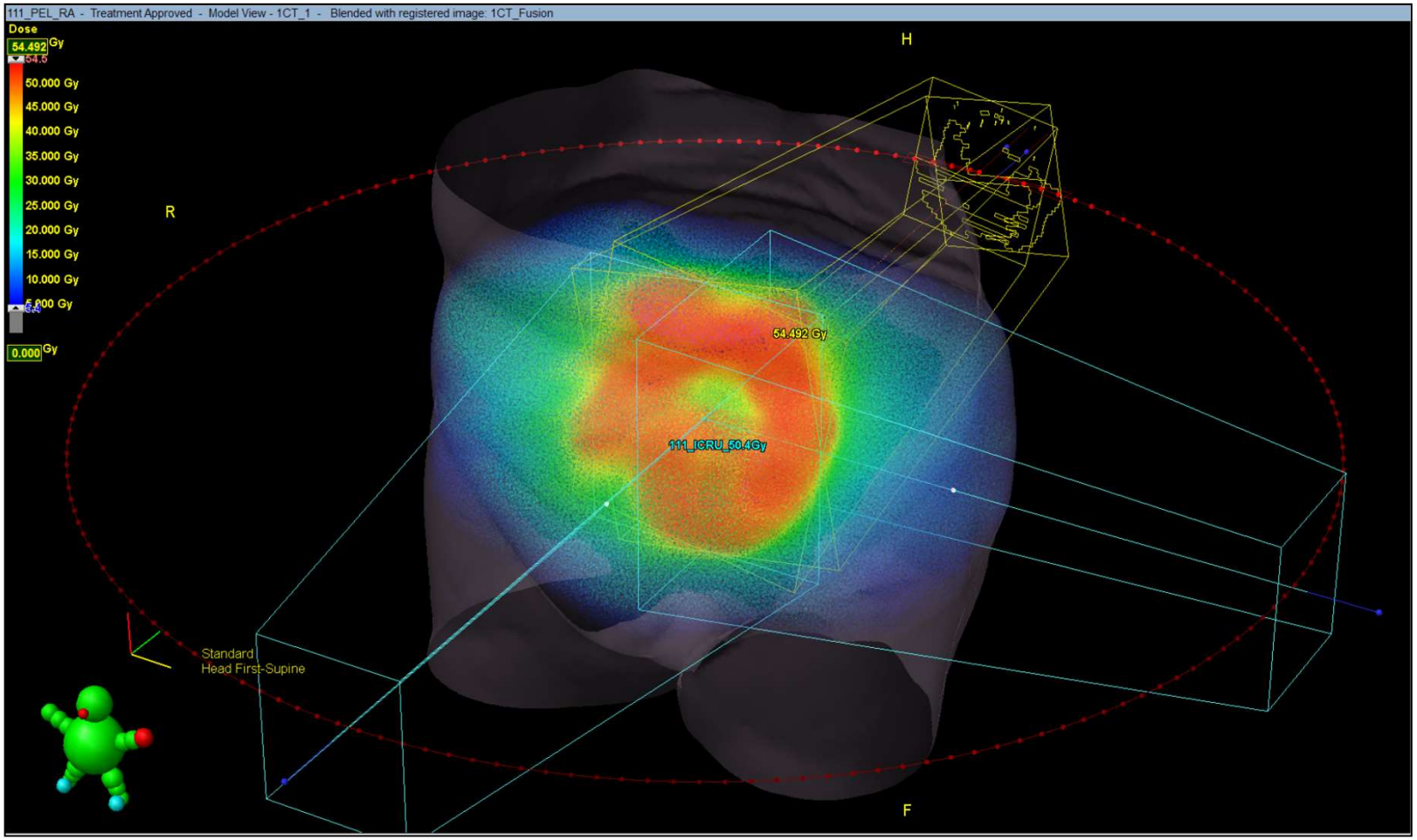
Cas clinique 1

- Proposition pour le ttt adjuvant
  - Pas de chimiothérapie vu l'âge de la patiente
  - Curiethérapie ok
  - Mais RT externe pelvienne aussi, vu l'absence de staging ganglionnaire
  - Prescription: 50.4 Gy en 28 fractions (RTOG)
  - Technique: VMAT

Cas clinique 1



Cas clinique 1



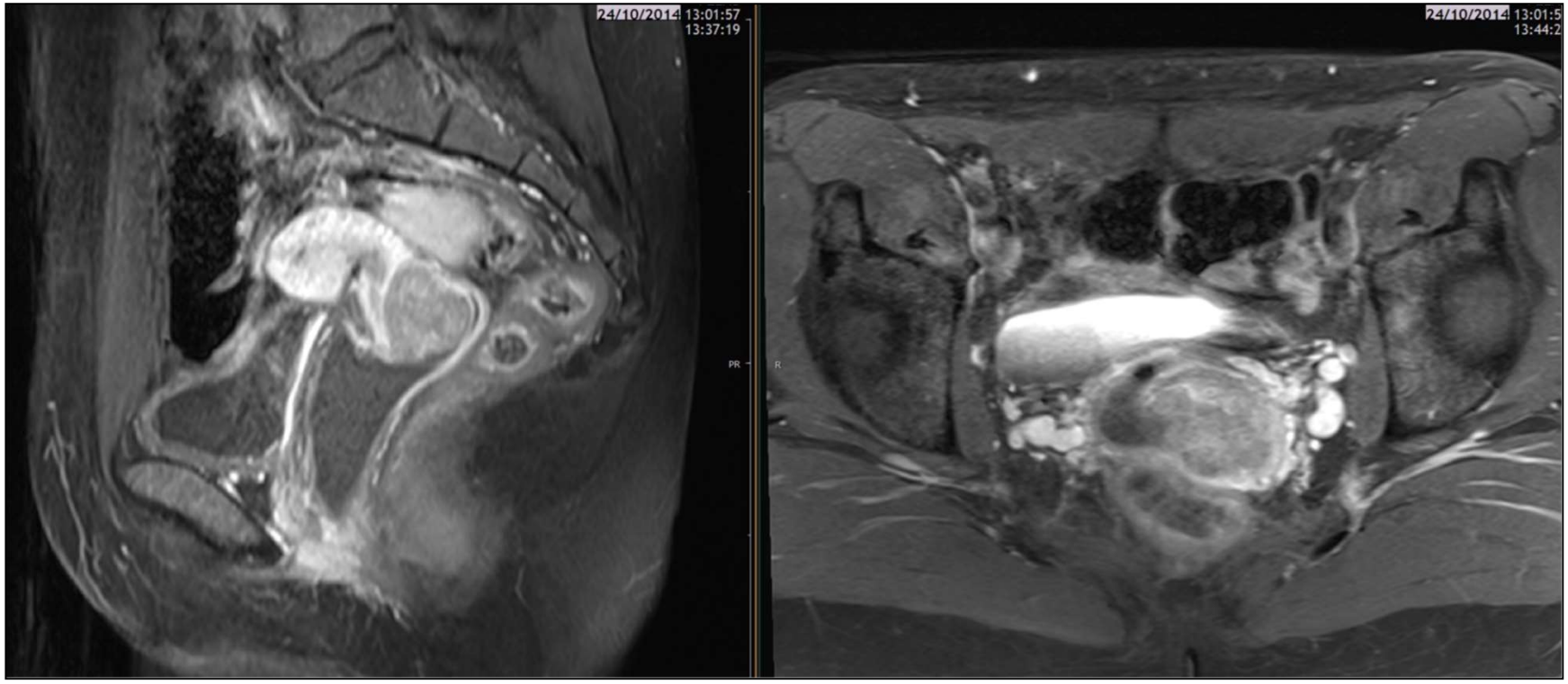
Cas clinique 1

- Tolérance RT externe pelvienne:
  - Diarrhées importantes, et douleurs abdominales
  - Traitement stoppé à 45 Gy en 25 fractions (standard alternatif, NB antécédent de péritonite)
  - Résolution complète par la suite sur un mois
- Curiethérapie endovaginale au CHUV, 2 x 5 Gy
- Evolution:
  - Plusieurs épisodes de subileus
  - Pas de récidive tumorale

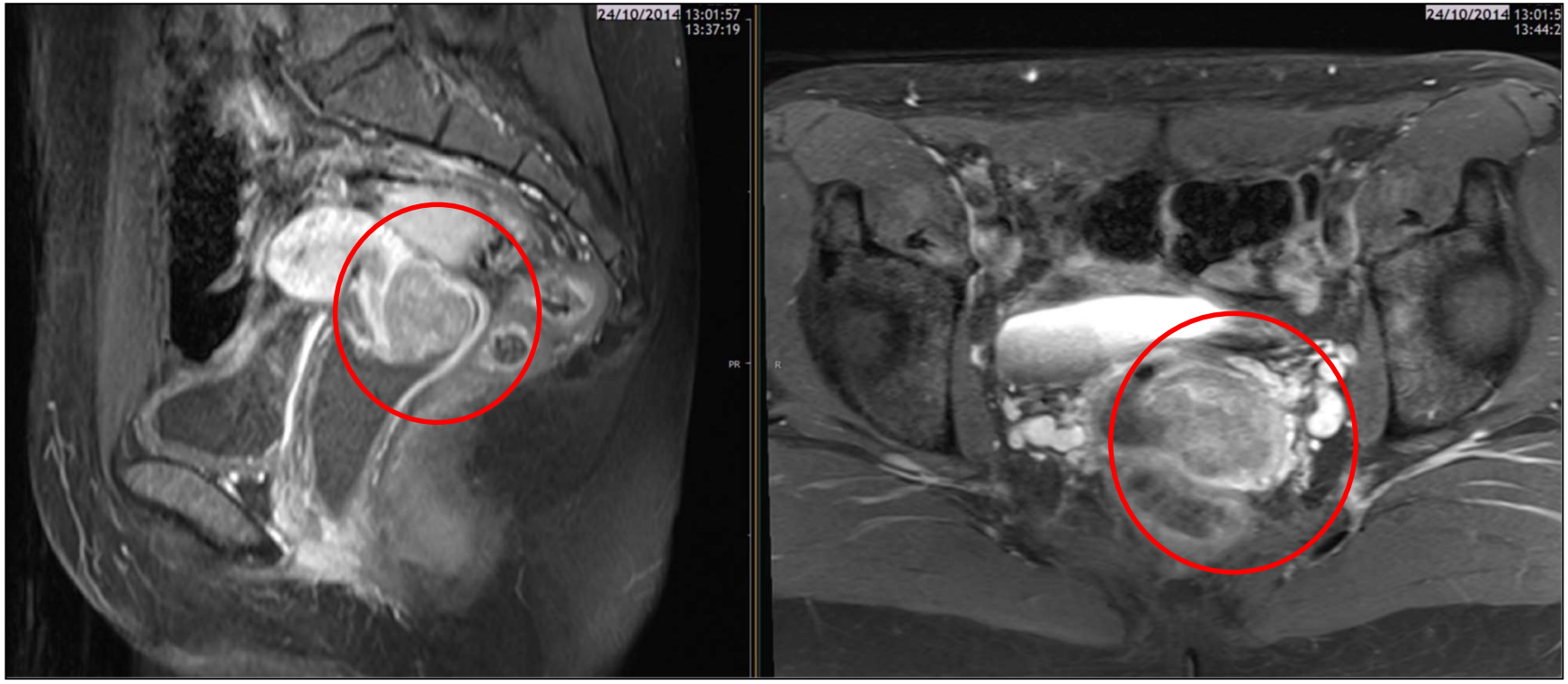
Cas clinique 2

- Pte de 44 ans avec des saignements après les rapports, se péjorant sur quelques mois
- Examen gynécologique: masse tumoral du col et du fornix
- Biopsie: carcinome neuroendocrine à grandes cellules (très rare, très aggressif)
- IRM: lésion du col de 4,3 cm, sans envahissement du voisinage ni adénopathie
- PET-CT: pas d'adénopathie ou métastase

Cas clinique 2



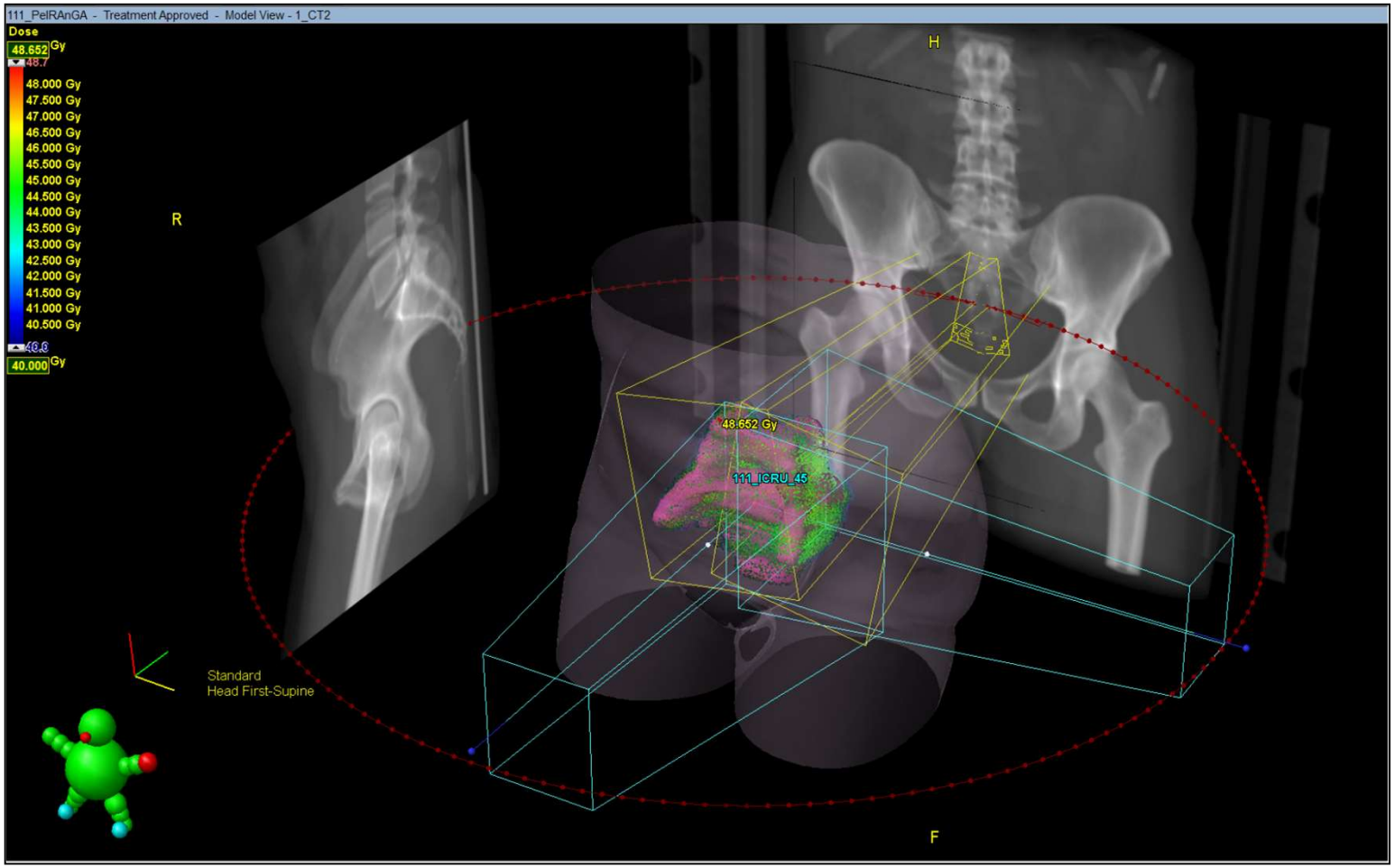
Cas clinique 2



Cas clinique 2

- Décision thérapeutique
- Chimiothérapie (comme pour les carcinomes à petites cellules pulmonaires)
- RT externe pelvienne (pas para-aortique vu absence d'adénopathies au PET)
  - 45 Gy en 25 fractions, par VMAT
- Hystérectomie selon réponse
- Curiethérapie après hystérectomie, selon analyse anatomo-pathologique

Cas clinique 2



Cas clinique 2

- Tolérance
  - Diarrhées et nausées +++
  - Résolution complète par la suite
- Hystérectomie
  - Résidu tumoral de 2,3 cm, de bas grade
- Curiethérapie endovaginale à Aarau, 3 x 5 Gy
- Juin 2015: bilan sp, patiente en pleine forme

Plan

- Quelques généralités
- Les cancers de l'endomètre
- Les cancers du col
- Les cancers de l'ovaire (pour votre culture médicale générale)
- Les cancers de la vulve et du vagin (qques slides)
- Toxicités de la RT
- Quelques cas cliniques
- Take home messages et questions

Plan

- Quelques généralités
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- Take home messages et questions

Take home messages

- Cancer de l'endomètre
  - Maladie de la femme âgée vivant dans l'ouest industrialisé
  - Chirurgie au centre de la prise en charge
  - RT adjuvante: curiethérapie >> RT externe

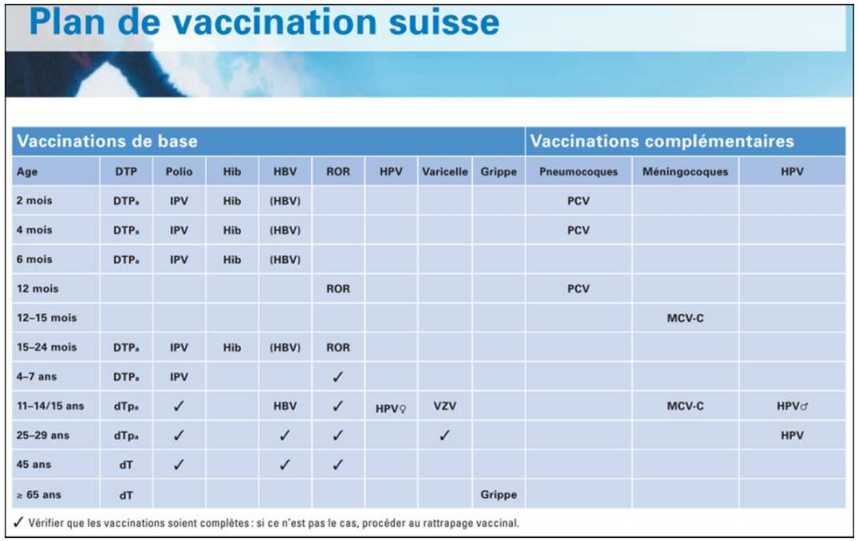
Take home messages

- Cancer du col
  - Maladie de la femme moins âgée, touchant les pays en voie de développement
  - Importance du dépistage
  - Importance de l'HPV
  - Prise en charge chirurgicale si précoce
  - Prise en charge souvent par radio-chimiothérapie
  - Importance de la curiethérapie, non remplaçable par l'IMRT ou par la stéréotaxie

Take home messages

- La RT dans les tumeurs gynécologiques
  - Importante mais indications rares en Suisse
  - Perte des compétences en curiethérapie (?)
  - Toxicité aiguë et séquellaire potentiellement importantes

Take home messages



Plan de vaccination suisse

Vaccinations de base									Vaccinations complémentaires		
Age	DTP	Polio	Hib	HBV	ROR	HPV	Varicelle	Grippe	Pneumocoques	Méningocoques	HPV
2 mois	DTPa	IPV	Hib	(HBV)					PCV		
4 mois	DTPa	IPV	Hib	(HBV)					PCV		
6 mois	DTPa	IPV	Hib	(HBV)							
12 mois					ROR				PCV		
12–15 mois										MCV-C	
15–24 mois	DTPa	IPV	Hib	(HBV)	ROR						
4–7 ans	DTPa	IPV			✓						
11–14/15 ans	dTpa	✓		HBV	✓	HPV♀	VZV			MCV-C	HPV♂
25–29 ans	dTpa	✓		✓	✓		✓				HPV
45 ans	dT	✓		✓	✓						
≥ 65 ans	dT							Grippe			

✓ Vérifier que les vaccinations soient complètes : si ce n'est pas le cas, procéder au rattrapage vaccinal.

- Faites-vous vacciner contre le HPV
- Faites vacciner vos amis et proches
- Faites vacciner vos enfants