Using Data-Driven Algorithms and Real-World Data for Updating Endometrial Clinical Practice Guidelines

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Abstracts

Introduction/Background Clinical practice guidelines (CPGs) are commonly structured as manuals, where best practices are described as free text. Since most oncological CPGs have an extensive care pathway, keeping these CPGs unambiguous and up-to-date is complex. We propose an innovative approach that allows guideline developers to take action and consider updates when scientific developments of CPGs (represented by the National Comprehensive Cancer Network, NCCN) or notable trends in clinical practice (represented by the Netherlands Cancer Registry, NCR) are identified.

Methodology First, the Dutch national and NCCN endometrial cancer CPGs were translated into clinical decision trees (CDTs). Then, we requested an endometrial cancer dataset from the NCR and mapped it onto the CDTs. Thereafter, we designed an information standard by applying FAIR principles. Finally, analysis and comparison functionalities were made available in a prototype dashboard. Predetermined thresholds were implemented that raise a notification to the guideline developers when numbers are outside expected range.

Results Both CPGs were successfully translated into CDTs. This yielded 10 and 15 CDTs, 58 and 72 data-items (patient and disease characteristics), 57 and 97 subpopulations, and 61 and 138 recommendations for the Dutch and NCCN CPG, respectively. Also, the NCR dataset was successfully mapped onto 5 CDTs from the Dutch CPG. The data were projected onto the CDTs. We identified adherence levels for all subpopulations and alternative treatments for non-adherent cases.

Conclusion Applying our method in a dashboard identified ambiguous, redundant, and incomplete sections of the Dutch CPG for endometrial cancer and raised notifications for relevant observations. This data-driven approach could serve as an automated surveillance to determine best clinical practice for patient (sub)populations and accelerate the creation of living recommendations. Moreover, this approach is suitable for applications in other diseases and settings.

E-cadherin and N-cadherin Expression in the Endocervix as a Predictive Factor in Patients with Endometrial Cancer

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Abstracts

Introduction/Background Endometrial cancer is the most common malignant gynecologic tumor in developed countries. Over the past few years, there has been an increase in the value of the mortality rate. Unfortunately we still do not have a certain, non-invasive diagnostic method that could identify the early stages of the disease. The selection of proteins assessed in the study was made on the basis of the epithelial to mesenchymal transition (EMT) phenomenon in neoplasms. E-cadherin is a epithelial glycoprotein responsible for the formation and maintenance of a normal tissue structure, responsible for maintaining coherence between epithelial cells. The mesenchymal protein N-cadherin, which is involved in cell proliferation, their survival and morphological transformation. The aim of the study was to evaluate the expression of E-cadherin and N-cadherin in the
endocervix and endometrium in patients with endometrial cancer. Due to the ease of obtaining the material from the cervix during cytological screening, the expression of selected proteins might be used as a predictive factor in endometrial cancer.

Methodology
The study was performed on group of 101 patients with type I and II endometrial carcinoma using immunohistochemical methods.

Results
Our results showed that both cadherins were expressed in the endocervix. In endometrial cancer type I, no significant differences were found in the expression of cadherins between the tumor and the cervix. It is possible to suspect an evenly ongoing neoplastic process both in the primary site and in the cervix. Statistically significant differences in the results turned out to be in the case of type II endometrial cancer, where a higher cadherin expression was noted in the tumor mass compared to the cervix, which suggests a greater dynamics of the EMT process in the tumor itself than in the cervix.

Conclusion
Our results may have significant clinical outcomes in the diagnosis of endometrial cancer.

2022-RA-1106-ESGO LAPAROSCOPIC VERSUS OPEN ABDOMINAL HYSTERECTOMY IN ENDOMETRIAL CANCER PATIENTS: ANALYSIS OF OUTCOME ACCORDING TO RISK GROUP
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Introduction/Background
For treatment of low-risk endometrial cancer, laparoscopic hysterectomy is the standard surgery approach. On the other hand, oncologic safety of minimally invasive technique in high risk disease has not yet been proven.

Methodology
Between 1996 and 2010, 359 endometrial cancer patients underwent laparoscopic or abdominal hysterectomy at Jena University Hospital. Recurrence rate and survival were analysed depending on surgical approach and risk categorization by classical histopathology (low-risk: stage IA without nodes metastasis, G2 or G2 with endometroid carcinoma; high-risk: stage IB or G3 or with nodes metastasis or serous papillary or clear cell type). Median follow-up was 72 months (minimum=2, maximum=214).

Results
In low risk patients, disease-free survival (DFS) rate was 95.6% and overall survival (OS) rate was 96.6% after laparoscopic hysterectomy (n=158) compared to DFS rate of 92.9% and OS rate of 100% after abdominal hysterectomy (n=43). In high risk patients, we found a DFS rate of 75.3% and OS rate of 85.1% in the laparoscopy group (n=97), while DFS rate was 73.3% and OS rate was 84.2% in the open surgery group (n=61). Proportional hazards assumption of Kaplan-Meier curves was not satisfied.

Conclusion
Long-term oncologic outcome of the laparoscopic procedure was not inferior compared to open abdominal hysterectomy in both low risk and high risk endometrial carcinoma patients according to data from our cohort. Results from patients treated in our center between 2011 and 2021 are under progress.

2022-RA-1124-ESGO PREDICTORS OF INVASIVE CARCINOMA IN ENDOMETRIAL HYPERPLASIA AND ITS INFLUENCE ON SURGICAL MANAGEMENT
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Introduction/Background
Endometrial hyperplasia consists of the proliferation of endometrial glands due to chronic exposure to high estrogen levels without the compensatory stimulus of progesterone. Other related factors are age, menopause and obesity. Transformation to endometrial cancer is greater if the hyperplasia is atypical; however, no reliable predictors have yet been described. The aim of this study is to analyze factors that can predict the evolution of hyperplasia to endometrial carcinoma.

Methodology
A retrospective study was performed on patients diagnosed with endometrial hyperplasia at Hospital La Paz from January 2016 to December 2021. Factors that could influence the development of endometrial cancer were analyzed, as well as those that could influence oncologic outcomes.

Results
169 patients with endometrial hyperplasia were included, of which 41 progressed to carcinoma. In this group 92.7% of the carcinomas were endometrioid, 82.9% were diagnosed at FIGO stage IA, 68.3% were G1; statistical significance was observed in these associations. 3.6% of patients suffered recurrences, in which endometrioid carcinoma, stages IA, IB and IV, G2 and G3 and combined treatment showed significant association with this event. Of the disease-free patients, 96.8% had endometrioid carcinoma and 87.1% had stage IA. No significant differences were detected in survival studies.

Conclusion
Advanced age, menopause, atypical hyperplasia, family history of cancer (specifically breast, colon and endometrial) and surgical treatment are statistically significantly associated with greater progression to endometrial cancer.

2022-RA-1128-ESGO HAS ENDOMETRIAL CANCER TREATMENT CHANGED DURING THE LAST YEARS? A CANCER REGISTRY DATA-BASED APPROACH TO MONITOR EXPECTED TREATMENT CHANGES AFTER THE RELEASE OF THE CORRESPONDING S3 GUIDELINE
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Introduction/Background
With approximately 11,000 new cases annually, endometrial cancer is the fourth most malignant in women in Germany. In April 2018 the S3 endometrial cancer guideline was released as part of the Germany oncology guideline program to promote quality and transparency of medical care. The S3 guideline advised on various aspects of endometrial cancer treatment such as surgical strategies and adjuvant therapy. Recommendations of this S3...