`ΒΙΟΓΡΑΦΙΚΟ ΣΗΜΕΙΩΜΑ

ΚΩΝΣΤΑΝΤΙΝΟΣ Ν. ΝΙΚΟΛΕΤΤΟΣ

MD, MSc, PhD

ΑΛΕΞΑΝΔΡΟΥΠΟΛΗ
ΙΟΥΝΙΟΣ 2024

Προσωπικά στοιχεία

Όνομα:	Κωνσταντίνος
Επώνυμο:	Νικολέττος
Πατρώνυμο:	Νικόλαος
Ημερομηνία γέννησης:	20/07/1993
Υπηκοότητα:	Ελληνική
Οικογενειακή κατάσταση:	Άγαμος
Διεύθυνσης κατοικίας:	Κ. Παλαιολόγου 37, Αλεξανδρούπολη, 68100
Τηλέφωνο:	6978087665
Διεύθυνση ηλεκτρονικού ταχυδρομείου:	k.nikolettos@yahoo.gr

Ακαδημαϊκή εμπειρία

2011: Αποφοίτηση από 3ο Ενιαίο Λύκειο Αλεξανδρούπολης.

2011: Εισαγωγή στην Ιατρική Σχολή «Comenius University, Faculty of Medicine, Bratislava».

2017: Αποφοίτηση από την Ιατρική «Comenius University, Faculty of Medicine, Bratislava». Γενικός βαθμός: «Άριστα».

2019: Απόκτηση Τίτλου Μεταπτυχιακού Προγράμματος Σπουδών (MSc) «Ανθρώπινη Αναπαραγωγή» διάρκειας δύο εξαμήνων του Δημοκρίτειου Πανεπιστημίου Θράκης. Γενικός βαθμός: «Άριστα».

2023: Έναρξη και ολοκλήρωση του Μεταπτυχιακού Προγράμματος Σπουδών (ΠΜΣ) «Application of Endoscopic Surgical Techniques in Gynecology» του Αριστοτέλειου Πανεπιστήμιου Θεσσαλονίκης διάρκειας δύο εξαμήνων, υπολείπεται η παράδοση της τελικής διπλωματικής εργασίας.

2023: Διδάκτωρ Δημοκρίτειου Πανεπιστημίου Θράκης, με θέμα «Διερεύνηση της πιθανής συσχέτισης των επιπέδων της λεπτίνης, της αδιπονεκτίνης και της kisspeptin με τα ωοθηκικά αποθέματα των γυναικών αναπαραγωγικής ηλικίας».
Βαθμός: «Άριστα».

Ιατρική προϋπηρεσία

10/2017-06/2018: Οπλίτης Ιατρός στον στρατό ξηράς με υπηρεσία και στο 216 ΚΙΧΝΕ Αλεξανδρούπολης.

08/2018-08/2019: Ειδικευόμενος στη Β' Προπαιδευτική Χειρουργική Κλινική, ΓΝΑ «Λαϊκό», Ιατρικής Σχολή, Εθνικό και Καποδιστριακό Πανεπιστήμιο Αθηνών.

08/2019-02/2020:	Πλήρης απόσπαση στη Γυναικολογική Κλινική, ΓΝΑ «Λαϊκό».
03/2020-06/2021:	Ειδικευόμενος στη Μαιευτική Γυναικολογική Κλινική, ΓΝΕ «Θριάσιο».
06/2021 έως και 2024:	Ειδικευόμενος στην Πανεπιστημιακή Μαιευτική Γυναικολογική Κλινική, Δημοκρίτειο Πανεπιστήμιο Θράκης Αλεξανδρούπολη.

Ξένες γλώσσες

- Άριστη γνώση Αγγλικής (εγγραφή στο General Medical Council με άδεια ασκήσεως επαγγέλματος).
- Καλή γνώση Γερμανικής (B1 Zertifikat).

Διδακτικό έργο

- Επικουρικό διδακτικό έργο στο γνωστικό αντικείμενο «Μαιευτική - Γυναικολογία» του μαθήματος «Μαιευτική - Γυναικολογία» κατά το ακαδημαϊκό έτος 2021-22 (στα πλαίσια του προγράμματος υποστήριξη των εκπαιδευτικών δραστηριοτήτων του Δημοκρίτειου Πανεπιστημίου Θράκης με την ενσωμάτωση ενισχυτικής διδασκαλίας επιπρόσθετα των κύριων διαλέξεων), της Μαιευτικής Γυναικολογικής Κλινικής του Δημοκριτείου Πανεπιστημίου Θράκης.
- Ενεργός συμμετοχή από τον Αύγουστο του 2021 έως και σήμερα, στην καθημερινή πρακτική άσκηση των 6-ετών φοιτητών στη Μαιευτική Γυναικολογία καθώς και αυτόνομη συμμετοχή στα φροντιστηριακά μαθήματα των φοιτητών με εισηγήσεις θεμάτων Μαιευτικής Γυναικολογίας, επαναλαμβανόμενες σε κάθε ομάδα φοιτητών.
- Εντεταλμένος διδάσκων (εαρινό εξάμηνο Ακαδημαϊκού έτους 2023-24) του μαθήματος Μαιευτικής Γυναικολογίας στα πλαίσια της απόκτησης ακαδημαϊκής εμπειρίας.
- Διδασκαλία στο Πρόγραμμα Μεταπτυχιακών Σπουδών με τίτλο «Προγεννητικός έλεγχος - Τοκετός - Αντισύλληψη», στο Β’ εξάμηνο του ακαδημαϊκού έτους 2023-24, του Δημοκριτείου Πανεπιστημίου Θράκης.
- Συμμετοχή στο πρόγραμμα θεωρητικών μαθημάτων του κατ’ επιλογήν μαθήματος «Πειραματική και Κλινική έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2019-20.
- Εκπαίδευση Φοιτητών Ιατρικής στην πρακτική άσκηση του κατ’ επιλογήν υποχρεωτικού μαθήματος «Πειραματική και Κλινική Έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2019-20.
- Συμμετοχή στο πρόγραμμα θεωρητικών μαθημάτων του κατ’ επιλογήν μαθήματος «Πειραματική και Κλινική έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2020-21.
- Εκπαίδευση Φοιτητών Ιατρικής στην εικονική πρακτική άσκηση του κατ’ επιλογήν υποχρεωτικού μαθήματος «Πειραματική και Κλινική Έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2020-21.

- Συμμετοχή στο πρόγραμμα θεωρητικών μαθημάτων του κατ' επιλογήν μαθήματος «Πειραματική και Κλινική έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2021-22.
- Εκπαίδευση Φοιτητών Ιατρικής στην πρακτική άσκηση του κατ' επιλογήν υποχρεωτικού μαθήματος «Πειραματική και Κλινική Έρευνα» της Ιατρικής Σχολής του Εθνικού και Καποδιστριακού Πανεπιστημίου Αθηνών. Ακαδημαϊκό έτος 2021-22.

Ομιλίες σε Συνέδρια

- Ομιλία με θέμα «BRCA μεταλλάξεις: Συσχέτιση με ωοθηκικές εφεδρείες και πρόωρη εμμηνόπαυση» στο συνέδριο «Νεότερες εξελίξεις σε HPV & Βιοδείκτες στη Μαιευτική και Γυναικολογία Νο 7», Λάρισα 15-17 Δεκεμβρίου 2023.
- Ομιλία με θέμα «Οι ωοθηκικές εφεδρείες σε γυναίκες φορείς BRCA μεταλλάξεων και πρόωρη εμμηνόπαυση» στο «1ο Πανελλήνιο Συνέδριο Καρκίνος - Υπογονιμότητα - Υποβοηθούμενη Αναπαραγωγή», Αθήνα, 2-4 Δεκεμβρίου 2022.
- Ομιλία με θέμα «Η επίδραση της πανδημίας στην εκπαίδευση στη Μαιευτική και Γυναικολογία» στο «6ο Συνέδριο Εκπαίδευσης και Έρευνας», Αλεξανδρούπολη, 28-30 Ιανουαρίου 2022.
- Ομιλία με θέμα «Η επίδραση της πανδημίας COVID-19 στην εκπαίδευση των ειδικευομένων» στο «15ο Πανελλήνιο Συνέδριο Μαιευτικής και Γυναικολογίας», Αθήνα 2-5 Σεπτεμβρίου 2021.
- Ομιλία με θέμα «BRCA1 και BRCA2 και ωοθηκικές εφεδρείες: Ποια είναι σήμερα τα δεδομένα» στο «3ο Πανελλήνιο Συνέδριο Αναπαραγωγικής Ιατρικής», Αλεξανδρούπολη 16-18 Οκτωβρίου 2020.
- Ομιλία με θέμα «Στοχευμένες θεραπείες για τον τριπλά αρνητικό καρκίνο του μαστού: Ερευνητικά δεδομένα και μελλοντικές προοπτικές» στο «7ο Πανελλήνιο Συνέδριο Ελληνικής Χειρουργικής Εταιρείας Μαστού», Αθήνα 1-3 Νοεμβρίου 2019.
  Η εργασία απέσπασε βραβείο 2ης καλύτερης προφορικής ανακοίνωσης στο συνέδριο.

Συμμετοχή σε επιστημονική και οργανωτική επιτροπή συνεδρίων

- Συμμετοχή στην επιστημονική επιτροπή του «1ου Πανελλήνιου Συνεδρίου Καρκίνος - Υπογονιμότητα - Υποβοηθούμενη Αναπαραγωγή», Royal Olympic Hotel, Αθήνα, 2-4 Δεκεμβρίου 2022.

- Συμμετοχή στην οργανωτική επιτροπή του «3ου Πανελλήνιου Συνεδρίου Αναπαραγωγικής Ιατρικής», Ramada Plaza Thraki, Αλεξανδρούπολη, 16-18 Οκτωβρίου 2020.

- Προεδρείο στο «4ο Πανελλήνιο Συνέδριο Αναπαραγωγικής Ιατρικής» με θέμα: Artificial Intelligence στην υποβοηθούμενη αναπαραγωγή & ανάπτυξη αλγορίθμων

Ανακοινώσεις σε Συνέδρια και Ημερίδες

- «Καρκίνος του ήπατος κατά τη διάρκεια της κύησης την τελευταία δεκαετία». Ψιλοπάτης Ι, Γαρμπής Ν, **Νικολέττος Κ**, Αντωνίου Ε, Δημητρούλης Δ, Κουράκλης Γ, Πρεβεζάνος Δ, Κόντζογλου Κ, Δαμάσκος Χ. «33ο Πανελλήνιο Συνέδριο Χειρουργικής», Αθήνα, 11-15 Νοεμβρίου 2023.

- «Προγεννητική διάγνωση συνδρόμου EEC- 3». Σαχνόβα Ν, Οικονόμου Ε, Αλεξίου Α, **Νικολέττος Κ**, Ναλμπάντη Θ, Κρητσιωτάκη Ν, Κοτανίδου Σ, Κυριάκου Δ, Παπανικολοπούλου Σ, Κοντομανώλης Ε, Τσικούρας Π, Νικολέττος Ν, Γερεντέ Α. «12ο Πανελλήνιο Συνέδριο Ελληνικής Εταιρείας Εμβρυομητρικής Ιατρικής», Ιωάννινα, 26-28 Μαΐου 2023.

- «Προγεννητική διάγνωση όγκου στοματικής κοιλότητας». Αλεξίου Α, Οικονόμου Ε, Σαχνόβα Ν, **Νικολέττος Κ**, Ναλμπάντη Θ, Κρητσιωτάκη Ν, Κοτανίδου Σ, Κυριάκου Δ, Παπανικολοπούλου Σ, Κοντομανώλης Ε, Τσικούρας Π, Νικολέττος Ν, Γερεντέ Α. «12ο Πανελλήνιο Συνέδριο Ελληνικής Εταιρείας Εμβρυομητρικής Ιατρικής», Ιωάννινα, 26-28 Μάϊου 2023.

- «Προγεννητική διάγνωση εμβρυϊκού ύδρο-μήτρο-κόλπου». Οικονόμου Ε, Αλεξίου Α, Σαχνόβα Ν, **Νικολέττος Κ**, Ναλμπάντη Θ, Κρητσιωτάκη Ν, Κοτανίδου Σ, Κυριάκου Δ, Παπανικολοπούλου Σ, Κοντομανώλης Ε, Τσικούρας Π, Νικολέττος Ν, Γερεντέ Α. «12ο Πανελλήνιο Συνέδριο Ελληνικής Εταιρείας Εμβρυομητρικής Ιατρικής», Ιωάννινα, 26-28 Μαΐου 2023.

- «Ο ρόλος των φυσικών φονικών κυττάρων του ενδομητρίου στην πρόκληση επαναλαμβανόμενων αποβολών και αποτυχιών εμφύτευσης: Από την παθοφυσιολογία στις θεραπευτικές επιλογές». Πιστόλα Κ, Πάντος Κ, Ραπάνη Α, Γρηγοριάδης Σ, Πάντου Α, Μαζιώτης Ε, Κοκκίνη Γ, Τσιρλιγκάνη Χ, Μπόλαρης Σ, **Νικολέττος Κ**, Χρονοπούλου Μ, Σιμοπούλου Μ, Σφακιανούδης Κ. «1ο Πανελλήνιο Συνέδριο Καρκίνος - Υπογονιμότητα - Υποβοηθούμενη Αναπαραγωγή», Αθήνα, 2-4 Δεκεμβρίου 2022.

- «The association of transvaginal ultrasound examination in first trimester of pregnancy and preterm birth». Alexiou A, Bothou A, **Nikolettos K**, Tsirkas I, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «Comparison of postnatal intestinal colonization of neonates undergoing vaginal seeding with neonates born with elective cesarean section». Anthoulaki-Vatsidou X, Gaitatzi F, **Nikolettos K**, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «Ultrasound assessment of the endometric in postmenopausal asymptomatic women using hormonal substitutions». Chalkidou A, Bothou A, Koukoulomati A, **Nikolettos K,** Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «Attitudes toward contraception in two different populations». Chatzilazarou A, Bothou A, **Nikolettos K**, Chalkidou A, Nalbanti AT, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «The current information of thrace high school students regarding contracting and sexual habits». Koukoulomati A, Gaitatzi F, Chalkidou A, Michalopoulos S, **Nikolettos K**, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «Mode of delivery in twin pregnancies. Our preliminary results». Michalopoulos S, Kassapi A, **Nikolettos K**, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «First trimester sonographic findings in a fetus with trisomy 13 mosaicism». Papanikolopoulou S, Goylis D, Domali E, **Nikolettos K**, Alexiou A, Koukoulomati A, Athanasiadis A, Tsikouras P Tsikouras, Nikolettos N, Gerende A. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022.

- «IgG4 σχετιζόμενη νόσος στο μαστό: Συστηματική ανασκόπηση μιας ιδιαίτερα σπάνιας οντότητας». Γαρμπή Α, Γαρμπής Ν, Δαμάσκος Χ, **Νικολέττος Κ**, Γεωργακοπούλου ΒΕ, Αντωνίου Ε, Δημητρούλης Δ, Κόντζογλου Κ. «32ο Πανελλήνιο Συνέδριο Χειρουργικής», Θεσσαλονίκη, 4-7 Νοεμβρίου 2020.

- «Συσχέτιση των μορφολογικών χαρακτηριστικών και της συμπεριφοράς του ωάριου κατά την icsi με την έκβαση ενός κύκλου εξωσωματικής γονιμοποίησης: Είναι η ημέρα 0 ενδεικτική του αποτελέσματος»; Μαζιώτης Ε, Σφακιανούδης Κ, Γιαννέλου Π, Γρηγοριάδης Σ, Ραπάνη Α, Τσιούλου Π, **Νικολέττος Κ,** Τιπτιρή-Κουρπέτη Α, Πάντου Α, Κουτσιλιέρης Μ, Ασημακόπουλος Β, Νικολέττος Ν, Σιμοπούλου Μ. «3ο Πανελλήνιο Συνέδριο Αναπαραγωγικής Ιατρικής», Αλεξανδρούπολη, 16-18 Οκτωβρίου 2020.

- «Διερεύνηση των πρακτικών απόρριψης εμβρύων στο εμβρυολογικό εργαστήριο σε παγκόσμια κλίμακα». Γιαννέλου Π, Σιμοπούλου Μ, Σφακιανούδης Κ, Ραπάνη Α, Μαζιώτης Ε, Τσιούλου Π, Γρηγοριάδης Σ, Λαμπροπούλου Μ, Μαντάς Δ, **Νικολέττος Κ**, Κατούνα Α, Κουτσιλιέρης Μ, Πάντος Κ, Harper J. «3ο Πανελλήνιο Συνέδριο Αναπαραγωγικής Ιατρικής», Αλεξανδρούπολη, 16-18 Οκτωβρίου 2020.

- «Αντιμετώπιση κάκωσης χυλοφόρου δεξαμενής με έγχυση PRP». Γαρμπής Ν, Δαμάσκος Χ, Γαρμπή Α, Βαβουράκης Μ, **Νικολέττος Κ.**, Κόντζογλου Κ, Τόμος Π. «16ο Πανελλήνιο Συνέδριο Χειρουργικής Ενδοκρινών Αδένων», Αθήνα, 22-24 Νοεμβρίου 2019.

- «Στοχευμένες θεραπείες για τον τριπλά αρνητικό καρκίνο του μαστού: Ερευνητικά δεδομένα και μελλοντικές προοπτικές». Γαρμπής Ν, Δαμάσκος Χ, Γαρμπή Α, **Νικολέττος Κ**,

Βαβουράκης Μ, Κόντζογλου Κ, Μαντάς Δ. «7ο Πανελλήνιο Συνέδριο Ελληνικής Χειρουργικής Εταιρείας Μαστού», Αθήνα, 1-3 Νοεμβρίου 2019.

Δημοσιευμένες Περιλήψεις Συνεδρίων

- Abstracts of «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V., 12-15 Oktober 2022, München». Geburtsh Frauenheilk. 2022;82:e37-e196.

  Περιλαμβάνει τις περιλήψεις των:

  - «The association of transvaginal ultrasound examination in first trimester of pregnancy and preterm birth». Alexiou A, Bothou A, **Nikolettos K**, Tsirkas I, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e39.

  - «Comparison of postnatal intestinal colonization of neonates undergoing vaginal seeding with neonates born with elective cesarean section». Anthoulaki-Vatsidou X, Gaitatzi F, **Nikolettos K**, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e42-43.

  - «Ultrasound assessment of the endometric in postmenopausal asymptomatic women using hormonal substitutions». Chalkidou A, Bothou A, Koukoulomati A, **Nikolettos K,** Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e56.

  - «Attitudes toward contraception in two different populations». Chatzilazarou A, Bothou A, **Nikolettos K**, Chalkidou A, Nalbanti AT, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e56-57.

  - «The current information of thrace high school students regarding contracting and sexual habits». Koukoulomati A, Gaitatzi F, Chalkidou A, Michalopoulos S, **Nikolettos K**, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e107-108.

  - «Mode of delivery in twin pregnancies. Our preliminary results». Michalopoulos S, Kassapi A, **Nikolettos K**, Nikolettos N, Tsikouras P. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e126.

  - «First trimester sonographic findings in a fetus with trisomy 13 mosaicism». Papanikolopoulou S, Goylis D, Domali E, **Nikolettos K**, Alexiou A, Koukoulomati A, Athanasiadis A, Tsikouras P Tsikouras, Nikolettos N, Gerende A. «Kongress der Deutschen Gesellschaft für Gynäkologie und Geburtshilfe e. V.», Μόναχο, 12-15 Οκτωβρίου 2022. Geburtsh Frauenheilk. 2022;82:e137-138.

Λαπαροσκοπικα Courses

- Expert in Gynecologic Laparoscopic Surgery, Hands-on Course, Αθήνα, 14-16 Οκτωβρίου.
- GESEA Level 1 E-Learning, 10 Ιουλίου 2023.
- GESEA Training Session, LASTT1, Θεσσαλονίκη, 22 Σεπτεμβρίου 2023.
- ESHRE Added value of endoscopic surgery in the era of ART + GESEA-ECRES Level 1 training session, Θεσσαλονίκη, 7-8 Δεκεμβρίου 2023.

Διακρίσεις

- Βραβείο 2ης Καλύτερης Προφορικής Ανακοίνωσης για την εργασία «Στοχευμένες θεραπείες για τον τριπλά αρνητικό καρκίνο του μαστού: Ερευνητικά δεδομένα και μελλοντικές προοπτικές». Γαρμπής Ν, Δαμάσκος Χ, Γαρμπή Α, **Νικολέττος Κ**, Βαβουράκης Μ, Κόντζογλου Κ, Μαντάς Δ. «7ο Πανελλήνιο Συνέδριο Ελληνικής Χειρουργικής Εταιρείας Μαστού», Αθήνα, 1-3 Νοεμβρίου 2019.

Δημοσιεύσεις σε διεθνή περιοδικά

- **NGF, EPO, and IGF-1 in the Male Reproductive System**

  Chryssa Metallinou , Chrysovalanto Staneloudi, **Konstantinos Nikolettos** , Byron Asimakopoulos

  J Clin Med. 2024 May 15;13(10):2918. doi: 10.3390/jcm13102918. PMID: 38792459; PMCID: PMC11122040.

  Περίληψη

  Several studies have demonstrated interesting results considering the implication of three growth factors (GFs), namely nerve growth factor (NGF), erythropoietin (EPO), and the insulin-like growth factor-I (IGF-1) in the physiology of male reproductive functions. This review provides insights into the effects of NGF, EPO, and IGF-1 on the male reproductive system, emphasizing mainly their effects on sperm motility and vitality. In the male reproductive system, the expression pattern of the NGF system varies according to the species and testicular development, playing a crucial role in morphogenesis and spermatogenesis. In humans, it seems that NGF positively affects sperm motility parameters and NGF supplementation in cryopreservation media improves post-thaw sperm motility. In animals, EPO is found in various male reproductive tissues, and in humans, the protein is present in seminal plasma and testicular germ cells. EPO receptors have been discovered in the plasma membrane of human spermatozoa, suggesting potential roles in sperm motility and vitality. In humans, IGF-1 is expressed mainly in Sertoli cells and is present in seminal plasma, contributing to cell development and the maturation of spermatozoa. IGF-1 seems to modulate sperm motility, and treatment with IGF-1 has a positive effect on sperm motility and vitality. Furthermore, lower levels of NGF or IGF-1 in seminal plasma are associated

with infertility. Understanding the mechanisms of actions of these GFs in the male reproductive system may improve the outcome of sperm processing techniques.

- **The Effect of Open and Closed Oocyte Vitrification Systems on Embryo Development: A Systematic Review and Network Meta-Analysis**

Konstantinos Pantos, Evangelos Maziotis, Anna Trypidi, Sokratis Grigoriadis , Kristi Agapitou, Agni Pantou, **Konstantinos Nikolettos**, Georgia Kokkini, Konstantinos Sfakianoudis, Kimball O. Pomeroy, Mara Simopoulou

J. Clin. Med 2024 *Apr 30;13(9):2651. doi: 10.3390/jcm13092651. PMID: 38731179.*

Περίληψη

Background/Objectives: Open and closed vitrification systems are commonly employed in oocyte cryopreservation; however, there is limited evidence regarding a comparison of their separate impact on oocyte competence. This study uniquely brings to the literature, data on the effect of open versus closed vitrification systems on laboratory and clinical outcomes, and the effect of cooling and warming rates. Methods: A systematic search of the literature was performed using the databases PubMed/MEDLINE and the Cochrane Central Library, limited to articles published in English up to January 2023. A network meta-analysis was conducted comparing each vitrification system versus fresh oocytes. Results: Twenty-three studies were included. When compared to fresh oocytes, both vitrification devices resulted in lower fertilization rates per MII oocyte retrieved. When comparing the two systems in terms of survival rates, no statistically significant difference was observed. However, interestingly open systems resulted in lower cleavage and blastocyst formation rates per 2 pronuclear (2PN) oocyte compared to fresh controls, while at the same time no statistically significant difference was detected when comparing closed devices with fresh oocytes. Conclusions: In conclusion, closed vitrification systems appear to exert a less detrimental impact on the oocytes' competence, which is reflected in the blastocyst formation rates. Proof of superiority of one system versus the other may lead to standardization, helping to ultimately determine optimal practice in oocyte vitrification

- **AR1D1 and BRG1 expression in endometrial cancer**

Kontomanolis E., Symeonidis P., **Nikolettos K**., Perros P., Rody A., Tsikouras P., Nikolettos N., Giatromamolaki A.

In Vivo. 2024 *May-Jun;38(3):1260-1265. doi: 10.21873/invivo.13563. PMID: 38688602; PMCID: PMC11059895*.

Περίληψη

Background/Aim Endometrial cancer (EC) is the predominant malignancy among gynecologic cancers and ranks fourth among all types of cancer. Recently, researchers have focused on the development of new prognostic biomarkers. Subunits of the SWI/SNF protein complex, like the ARID1 and BRG1, have been associated with the development of endometrial cancer. The present study aimed to evaluate the

expression patterns of ARID1A and BRG1 in a collection of endometrioid adenocarcinomas of the uterus using immunohistochemistry.Patients and Methods The study comprised a total of thirty-three individuals diagnosed with stage I endometrioid endometrial cancer, treated with radical hysterectomy. The histological material was then examined to assess the cytoplasmic and nuclear expression of the proteins.ResultsARID1A exhibited expression in both the cytoplasm and nucleus of cancer cells, whereas BRG1 was mainly expressed in the nuclei. In addition, ARID1A exhibited a notable decrease in expression in grade 3 histology, with no significant correlation with the depth of myometrial invasion. The reduced expression was highly related to tumor expansion into the endocervix. The findings demonstrated a total absence of ARID1A expression in 27% of endometrioid carcinomas, with a significant reduction in expression in an additional 51% of cancer cells. These findings align with the most recent published data. In contrast, in the current study, BRG1 was rarely down-regulated and was extensively expressed in the majority of endometrioid carcinomas, preventing the possibility of statistical analysis.ConclusionIn summary, ARID1A expression loss can be used as a biomarker to guide post-operative therapy; however, further investigation is needed, especially for early-stage endometrial cancer.

- **The Impact of Periodontal Disease on Preterm Birth and Preeclampsia**

Panagiotis Tsikouras , Efthymios Oikonomou , **Konstantinos Nikolettos** , Sotiris Andreou , Dimitrios Kyriakou, Christos Damaskos, Nikolaos Garmpis, Vassiliki Monastiridou, Theopi Nalmpanti , Anastasia Bothou , George Iatrakis , Nikolaos Nikolettos

J Pers Med. 2024 *Mar 26;14(4):345. doi: 10.3390/jpm14040345. PMID: 38672972; PMCID: PMC11051368.*

Περίληψη

This review delves into the possible connection between periodontitis and negative pregnancy outcomes, such as preeclampsia and preterm birth. It highlights the potential influence of an unidentified microbial factor on preeclampsia and the effects of inflammatory responses on the rate of preterm births. Furthermore, it underscores the prevalent occurrence of oral ailments within the populace and their significant repercussions on quality of life. Hormonal fluctuations during pregnancy may exacerbate oral conditions such as pregnancy gingivitis and periodontitis, necessitating bespoke therapeutic approaches that take into account potential fetal ramifications. Periodontal disease, characterized by microbial attack and inflammatory response, results in tissue destruction and tooth loss. The oral cavity's susceptibility to bacterial colonization, which is primarily due to its role as a site for food intake, is highlighted. Furthermore, research indicates a correlation between inflammatory responses and factors such as prostaglandin E2 and IL-1β, and preterm birth. Therapeutic interventions are a focus of international research, with efforts being aimed at optimizing outcomes through larger studies involving pregnant women.

- **Labor management and neonatal outcomes in cardiotocography categories II and III (Review)**

Panagiotis Tsikouras , Efthimios Oikonomou , Anastasia Bothou , Dimimitrios Kyriakou , Theopi Nalbanti , Sotirios Andreou , Angelos Daniilidis , Panagiotis Peitsidis , Konstantinos Nikolettos , Georgios Iatrakis , Nikolaos Nikolettos

Med Int. 2024 Apr 1;4(3):27. doi: 10.3892/mi.2024.151. PMID: 38628383; PMCID: PMC11019468.

Περίληψη

The safe care of both mothers and fetuses during labor is a primary goal of all health professionals. The assessment of fetal oxygenation and well-being is a key aspect of perinatal care provided. Fetal heart rate (FHR) auscultation became part of daily obstetric practice in a number of countries during the 20th century and remains a key method of fetal monitoring, particularly in low-risk pregnancies. Cardiotocography (CTG) is the continuous monitoring and recording of the FHR and uterine myometrial activity, making it possible to assess the fetal condition. It therefore plays a critical role in the detection of fetal hypoxia during labor, a condition directly related to short- and long-term complications in the newborn. Herein, particular reference is made to the management of CTG category II and III standards, as well as to the handling of childbirth. In addition, specific FHR patterns are associated with immediate neonatal outcomes based on updated studies conducted worldwide. Finally, the prognostic significance of CTG and its potential as a prospective avenue for further investigation are also highlighted herein. Given that the misinterpretation of CTG findings is the most common cause of medical-legal responsibility, this knowledge field requires more emphasis and attention. The aim of the present review was to further deepen the knowledge on issues that mainly concern the safety and monitoring of pregnant women and fetuses during childbirth.

- **Association of Anti-Ro/SSA and Anti-La/SSB Autoantibodies With Pregnancy Outcome in the General Population**

Georgios Dragoutsos, Christina Tsiggalou, Efthymios Oikonomou, Anastasia Bothou, Grigorios Trypsiannis, **Konstantinos Nikolettos**, Christos Damaskos, Nikolaos Garmpis, Dimitrios Kyriakou, Theopi Nalbanti, Georgios Iatrakis, Nikolaos Nikolettos, Panagiotis Tsikouras

Mater Sociomed. 2024 ;36(1):47-53. doi: 10.5455/msm.2024.36.47-53. PMID: 38590603; PMCID: PMC10999136.

Περίληψη

Background: Autoimmune diseases encompass a diverse array of disorders that disturb the optimal functioning of the immune system, which is to eliminate the ‘foreign or/and dangerous’ to mistakenly target the body's own tissues. Objective: The aim of this research is to evaluate the most effective approach to managing autoimmune diseases within the framework of pregnancy. Methods: The exact causes and etiologies of these diseases are multifactorial and mostly still unclear. Ro/SSA autoantibodies and La/SSB, could be found in Sjögren’s disease (SJ), systemic lupus (SLE) and other autoimmune disorders. Smoking, stress, UV exposure, vitamin D deficiency, and other genetic and environmental factors have been identified as risk factors for rheumatic diseases. Results: Over the years, an ever-increasing incidence of these diseases has been observed in the general population, with the female sex being at increased risk for their occurrence. This fact raises the question of what should be the management of these pathological entities during pregnancy. Taking into account the very significant impact on the quality of paitients’daily life and the seemingly augmented prevalence of autoimmune diseases, as well as their preference in the female population, the reasonable question arises as to what should be the optimal management of these diseases in the context of pregnancy. Conclusion: Given the limited data of the global medical community regarding the etiological factors and mechanisms that trigger the onset of rheumatic diseases, the management of pregnant women is a complex conundrum that health professionals are challenged to face and solve

- **The Role of Urothelial Cancer-Associated 1 in Gynecological Cancers**

Nousiopoulou E, Vrettou K, Damaskos C, Garmpis N, Garmpi A,Tsikouras P, Nikolettos N, **Nikolettos K** , Psilopatis I

Curr Issues Mol Biol 2024 Mar 21;46(3):2772-2797. doi: 10.3390/cimb46030174. PMID: 38534790; PMCID: PMC10969036

Περίληψη

Gynecological cancers (GC) represent some of the most frequently diagnosed malignancies in women worldwide. Long-non-coding RNAs (lncRNAs) are regulatory RNAs increasingly being recognized for their role in tumor progression and metastasis in various cancers. Urothelial cancer-associated 1 (UCA1) is a lncRNA, first found deregulated in bladder cancer, and many studies have exposed its oncogenic effects in more tumors since. However, the role of UCA1 in gynecological malignancies is still unclear. This review aims to analyze and define the role of UCA1 in GC, in order to identify its potential use as a diagnostic, prognostic, or therapeutic biomarker of GC. By employing the search terms "UCA1", "breast cancer", "endometrial cancer", "ovarian cancer", "cervical cancer", "vaginal cancer", and "vulvar cancer" in the PubMed database for the literature review, we identified a total of sixty-three relevant research articles published between 2014 and 2024. Although there were some opposing results, UCA1 was predominantly found to be upregulated in most of the breast, endometrial, ovarian, cervical, and vulvar cancer cells, tissue samples, and mouse xenograft models. UCA1 overexpression mainly accounts for enhanced tumor proliferation and increased drug resistance, while also being associated with some clinicopathological features, such as a high histological grade or poor prognosis. Nonetheless, no reviews were identified about the involvement of UCA1 in vaginal carcinogenesis. Therefore, further clinical trials are required to explore the role of UCA1 in these malignancies and, additionally, examine its possible application as a target for upcoming treatments, or as a novel biomarker for GC diagnosis and prognosis.

- **Is there an association between leptin, adiponectin levels and the ovarian reserve in women of reproductive age?**

Nikolettos K, Vlahos N, Pagonopoulou O, Nikolettos N, Zikopoulos K, Tsikouras P, Kontomanolis E, Damaskos C, Garmpis N, Asimakopoulos B.

Front Endocrinol., **υπό κρίση.**

Περίληψη

Aim: To investigate the possible correlation of leptin and adiponectin levels with the ovarian reserves of women of reproductive age. Patients and Methods: 80 women aged 19-40 agreed to participate. Of these, 74 were finally included as in 6 women the blood sample was considered inappropriate due to hemolysis. Women were categorized into three main groups according to their ovarian reserve patterns: women with adequate ovarian reserves (Group A - AOR) (n=30), women with increased ovarian reserves (Group B - PCOS) (n=31) and women with diminished ovarian reserves (Group C - DOR) (n=13). Results: Women with diminished ovarian reserves had statistically significantly increased age and FSH compared to the other two groups. No statistically significant difference was found between the groups for E2, TSH. Moreover, BMI, LH, TT, 17- OHP, DHEA, AMH and AFC were increased in women with PCOS compared to the other two groups. Also, AMH and AFC were decreased in women with diminished ovarian reserves compared to the other two groups as expected. Leptin levels were elevated in women with PCOS but there was no statistically significant difference compared to the other two groups. Regarding adiponectin, women with PCOS had decrease levels compared to the other

groups, but the difference was not statistically significant. Conclusion: In our study the categorization of women based on ovarian reserves is in full agreement with the international literature. There are no strong indications that leptin and adiponectin levels are associated with the ovarian reserve in women of reproductive age. This specific area needs further investigation with a larger number of samples in order to reach safe conclusions.

- **A systematic review about cervical pregnancy and our experience.**

  Nikolettos K, Oikonomou E, Kotanidou S, Kritsotaki N, Kyriakou D, Tsikouras P, Kontomanolis E, Gerede A, Nikolettos N.

  Acta Medica Litu., **Υπό δημοσίευση**.

  Περίληψη
  Background: Cervical ectopic pregnancy is a relatively rare type of ectopic pregnancy and has no standardized guidelines for management. Methods: This systematic review is based on the collection of articles, published about ectopic cervical pregnancies over the last decade. Results: A series of cases about ectopic cervical pregnancies founded in the literature are presented thoroughly, analyzing the treatment method chosen for each case. There is no established approach for the management of this type of ectopic pregnancy. In this systematic review we present also our experience from a case that was treated in our department. Conclusion: It is important to consider as first-line treatment the conservative approaches in all cases of cervical pregnancy to preserve fertility. Minimally invasive methods are also described and preferred as second-line treatment, as reported in our literature review.

- **The impact of endometriosis on pregnancy.**

  Tsikouras P, Oikonomou E, Bothou A, Chaitidou P, Kyriakou D, **Nikolettos K**, Andreou S, Gaitatzi F, Nalbanti T, Peitsidis P, Michalopoulos S, Zervoudis S, Iatrakis G, Nikolettos N.

  J Pers Med. 2024;14(1):126. doi: 10.3390/jpm14010126. PMID: 38276248; PMCID: PMC10820275.

  Περίληψη
  Despite the increased frequency of endometriosis, it remains one of the most enigmatic disorders regarding its effects on pregnancy. Endometriosis adversely affects both natural and assisted conception. Impaired folliculogenesis, which causes follicular dysfunction and low egg quality, as well as luteal phase problems, reduced fertilization, and abnormal embryogenesis, are some of the mechanisms advocated to explain reproductive dysfunction. There is a rising need for a comprehensive study of the potential negative consequences of this condition on pregnancy outcomes, including the postpartum period, as more women with a medical history of endometriosis become pregnant. Obstetrical complications (small for gestational age [SGA], cesarean section [CS], miscarriage, hemorrhage, low placental adhesion, and preterm delivery) are statistically elevated in women with endometriosis. Furthermore, ruptured ovarian

endometrioma, appendicitis, intestinal perforation, and hemoperitoneum have been described in pregnancy. Obstetricians are largely unfamiliar with these complications, as they have not been thoroughly investigated. The development and pathogenesis of endometriosis is an important field of study and has not yet been fully elucidated. Finding these mechanisms is crucial for the development of new and more effective strategies to treat this condition. Endometriosis can have an impact on obstetric and neonatal outcomes of pregnancy, in addition to its potential effects on conception. To date, no additional monitoring is recommended for pregnancies with a history of endometriosis. However, more studies are urgently needed to assess the need for the tailored pregnancy monitoring of women with endometriosis.

- **Evaluation of the histone deacetylase 2 (HDAC-2) expression in human breast cancer.**

Damaskos C, Psilopatis I, Garmpi A, Dimitroulis D, **Nikolettos K**, Vrettou K, Sarantis P, Koustas E, Kouraklis G, Antoniou EA, Karamouzis MV, Nikolettos N, Tsikouras P, Marinos G, Kontomanolis E, Kontzoglou K, Garmpis N.

Cancers (Basel). 2024 Jan 1;16(1):209. DOI: 10.3390/cancers16010209. PMID: 38201636. PMCID: PMC10777907.

Περίληψη

Background/aim: Triple negative breast cancer belongs to the most aggressive breast cancer forms. Histone deacetylases (HDACs) constitute a class of enzymes that exhibit a significant role in breast cancer genesis and progression. In this study, we aimed at assessing the clinical importance of HDAC-2 in triple negative breast cancer. Materials and methods: A total of 138 breast cancer specimens were examined on an immunohistochemical basis. A statistical analysis was performed in order to examine the association between HDAC-2 and the survival and clinicopathological features of the patients**.** Results: Increased HDAC-2 expression was observed in every fourth case of triple negative breast cancer with positive HDAC-2 staining, whereas only 12 out of 98 non-triple negative breast cancer samples showed high HDAC-2 expression. HDAC-2 overexpression correlated with prolonged overall survival (OS) and disease-free survival (DFS) in triple negative breast cancer .Conclusions: High HDAC-2 levels in triple negative breast cancer seem to positively influence patient survival, disease stage and recurrence.

- **Different conception regarding contraceptive pill use among two different adolescent female populations in Thrace.**

Tsikouras P, Bothou A, Chatzilazarou A, Michalopoulos S, Kasapi A, Nikolettos K, Nikolettos N.

Eur J Midwifery. 2023;7(Supplement 1):A112. DOI: 10.18332/ejm/172015.

Περίληψη

Introduction: This is a study regarding the perception towards the use of the contraceptive pill in two different adolescent populations of Thrace. Material and Methods: Adolescent women aged (mean 15.9, min 13 max 19 years, SD 2.51), belonging to the two main religious

subgroups of Thrace (168 Orthodox Christians and 118 Muslims), during their visits to the family planning clinic of Democritus University of Thrace were invited to answer an anonymous questionnaire designed to investigate the contraceptive behavior of women in Thrace. The subject of the questions was the investigation of the women's level of information, the frequency of using the contraceptive pill, the sense of security it offers them in relation to contraception and the incidence of side effects depending on the time of taking it. The severity of the reported side effects and their role as a reason for discontinuation of contraceptive treatment were assessed. Results: A significant percentage of the Christian women surveyed expressed a positive view of the usefulness of the oral contraceptive pill as a method of contraception. Muslim women appeared less willing to use it as a relatively high percentage do not consider it a safe contraceptive method and consider taking it daily as a deterrent 5.1% of women experienced mild side effects with contraceptive use but only 4.7% discontinued treatment because of them. The marital status, the level of education and the frequency of contacts of the respondents were factors that strongly influence their sexual behavior. Conclusions: The contraceptive practice of Thracian women shows significant differences between the two subgroups under study and is directly influenced by the different socioeconomic characteristics of each.

- **Maternal age at the last birth and breast cancer risk: A case-control bicentric study.**

  Bothou A, Zervoudis S, Iatrakis G, Tsatsaris G, Sarella A, **Nikolettos K,** Tsikouras P.

  Eur J Midwifery. 2023;7(Supplement 1):A79.

  Περίληψη
  Epidemiologic studies on the relationship between breast cancer risk and maternal age at the time of the last birth produced mixed results. We conducted this case control-retrospective analysis to unbiasedly evaluate the association between maternal age at the last birth and the risk of breast cancer. Material and Methods:342 women who visited two breast clinics in Greece and gave birth to live infants were examined in our case-control retrospective research. Women without the disease were included in the control group, while those with breast cancer were included in the case group. In addition to digital bilateral mammography being conducted on those who were older than 40 years old, all women got a clinical evaluation that included a breast ultrasound. Results: With a p-value of 0.474, the Mann-Whitney test found no statistically significant difference between the two groups of women's distributions of maternal age at the birth of their last child and their risk of developing breast cancer. Conclusions: Our study found no statistically significant link between breast cancer and the mother's age at her last delivery. Further studies with a more significant number of patients are mandatory in order to confirm this result.

- **Role of leptin, adiponectin, and kisspeptin in polycystic ovarian syndrome pathogenesis.**

  Nikolettos K, Nikolettos N, Vlahos N, Pagonopoulou O, Asimakopoulos B.

  Minerva Obstet Gynecol. 2023;75(5):460-467. DOI: 10.23736/S2724-606X.22.05139-9. PMID: 36255161.

Περίληψη
Introduction: Polycystic ovarian syndrome (PCOS) affects 5-20% of females and is the most common cause of anovulatory infertility. Leptin seems to have an important role in reproduction. Many reproductive pathologies such as preeclampsia, PCOS, and endometriosis are associated to plasma adiponectin levels. Kisspeptin levels are increased in PCOS women. Evidence acquisition: A review of the literature was completed through the PubMed database aiming to find articles regarding leptin, adiponectin and kisspeptin and if they are related to PCOS pathogenesis. Evidence synthesis: Even today it is not clear what is the role of leptin in women with PCOS, although most of the researchers found increased levels of leptin as well as leptin resistance in PCOS (both obese and lean individuals). Many more longitudinal studies should be done to discover the usefulness of measuring adiponectin in prepubertal women who apparently have a possibility to develop PCOS to find out if they finally develop PCOS. Most of the researchers found that PCOS women have decreased levels of adiponectin unrelated to BMI levels. Nevertheless, not all studies had the same result. Moreover, it is necessary more studies to be made to investigate the connection between kisspeptin and other metabolic factors such as LH and insulin resistance. Conclusions: In general, it remains inconclusive whether leptin, adiponectin, and kisspeptin can be used as clinical and/or biochemical markers of PCOS. Therefore, it is essential to review the current data with regards to the association between PCOS and circulating leptin, adiponectin, and kisspeptin in women with PCOS.

- **Liver cancer and pregnancy: A review of the literature.**

Psilopatis I, Garmpis N, Garmpi A, Vrettou K, Sarantis P, Koustas E, **Nikolettos K**, Antoniou EA, Dimitroulis D, Kouraklis G, Karamouzis MV, Nikolettos N, Kontzoglou K, Damaskos C.

Anticancer Res. 2023;43(9):3861-3869. DOI: 10.21873/anticanres.16573. PMID: 37648309.

Περίληψη
Background/Aim: Liver cancer constitutes one of the leading cancers globally. During pregnancy, however, liver cancer is an absolute rarity, with very few cases reported in the international literature. The aim of the present review was to provide a useful update and summarize all case studies of liver cancer in pregnancy published between 2012-2023. Materials and Methods: A literature review was conducted using the MEDLINE, LIVIVO, and Google Scholar databases. Solely case reports and case studies written in the English language that explicitly reported on the presence of histologically confirmed HCC or intrahepatic cholangiocarcinoma during pregnancy were included in the data analysis. Results: After detailed evaluation, a total of 35 reported cases of liver cancer during pregnancy were identified, hence bringing the total number of reported cases globally to 83. Oncological challenges during pregnancy call for an interdisciplinary approach. Although the desire to preserve the pregnancy should be taken into consideration, specialists need to evaluate maternal and fetal well-being and choose the optimal oncological treatment with the least dangers for both the maternal and fetal safety. Conclusion: The present review proves that, despite its scarcity, liver cancer may always occur during pregnancy and clinicians should, therefore, remain vigilant and endeavor to detect and evaluate any hepatic mass or symptoms of liver cancer promptly and exhaustively.

- **Is there an association between circulating kisspeptin levels and ovarian reserve in women of reproductive age?**

  Nikolettos K, Vlahos N, Pagonopoulou O, Nikolettos N, Zikopoulos K, Tsikouras P, Kontomanolis E, Damaskos C, Garmpis N, Asimakopoulos B.

  In Vivo. 2023;37(5):2219-2223. DOI: 10.21873/invivo.13322. PMID: 37652519. PMCID: PMC10500527.

  Περίληψη

  Background/Aim: To investigate the possible association of kisspeptin levels with the ovarian reserves of women of reproductive age. Patients and Methods: Eighty women aged 19-40 participated after signing an informed consent. Of these, 74 were finally included as in 6 women the blood samples were considered inappropriate due to hemolysis. They were divided into three main groups according to their ovarian reserve patterns: women with adequate ovarian reserves (Group A - AOR) (n=30), women with increased ovarian reserves (Group B - PCOS) (n=31), and women with diminished ovarian reserves (Group C - DOR) (n=13). Results: Women with diminished ovarian reserves had statistically significantly increased age and FSH compared to the other two groups. No statistically significant difference was found between the three groups for estradiol and thyroid stimulating hormone. Moreover, body mass index, luteinizing hormone, total testosterone, 17-hydroxyprogesterone, dehydroepiandrosterone, anti-Mullerian hormone (AMH), and antral follicle count (AFC) were increased in group B compared to the other two groups. AMH and AFC were decreased in women with diminished ovarian reserves compared to the other two groups, as expected. The comparison of kisspeptin levels between the three groups showed that kisspeptin levels were increased in women with diminished ovarian reserves, compared to the other two groups, but without a statistically significant difference. However, kisspeptin levels in group C were statistically significantly higher than those in group A. Conclusion: There are no strong indications that kisspeptin levels are associated with the ovarian reserve in women of reproductive age.

- **Our experience with hydrogel-coated trisacryl microspheres in uterine artery embolization for the treatment of symptomatic uterine fibroids and adenomyosis: A follow-up of 11 years.**

  Tsikouras P, Oikonomou E, Tsatsaris G, Bothou A, Kyriakou D, **Nikolettos K**, Nalmbanti T, Peitsidis P, Trypsanis G, Iatrakis G, Nikolettos N, Souftas V.

  J Pers Med. 2023;13(9):1385. DOI: 10.3390/jpm13091385. PMID: 37763151. PMCID: PMC10532514.

  Περίληψη

  Uterine artery embolization (UAE) for the treatment of symptomatic uterine fibroids and non-controllable adenomyosis symptoms is a relatively new procedure for organ-preserving therapy. These benign conditions can become symptomatic in about 30% of women between the ages of 35 and 50. The purpose of the UAE either for fibroids or adenomyosis is the elimination of blood loss, the reduction in pain, and bulky or rectal pressure symptoms. The

purpose of this study is to present our experience in UAE with the use of hydrogel-coated tris acryl microspheres for the treatment of symptomatic uterine fibroids and adenomyosis.

- **Ovarian torsion in polycystic ovary syndrome: A potential threat?**

Psilopatis I, Damaskos C, Garmpis N, Vrettou K, Garmpi A, Antoniou EA, Chionis A, **Nikolettos K**, Kontzoglou K, Dimitroulis D.

Biomedicines. 2023;11(9):2503. DOI: 10.3390/biomedicines11092503. PMID: 37760944. PMCID: PMC10526011.

Περίληψη

Polycystic ovary syndrome (PCOS) constitutes the most prevalent endocrine disorder in women of reproductive age worldwide. Given the increased risk of ovarian torsion in the presence of large ovarian cysts, polycystic ovarian syndrome could be regarded as one of the most significant risk factors for ovarian and/or adnexal torsion in cases of significantly enlarged ovaries. The aim of the present review is to investigate, for the first time, the association between polycystic ovarian syndrome and ovarian torsion. We performed a review of the literature using the MEDLINE and LIVIVO databases in order to find relevant studies. By using the search terms “polycystic ovarian syndrome” and “ovarian torsion”, we were able to identify 14 studies published between 1995 and 2019. The present work constitutes the most up-to-date, comprehensive literature review focusing on the risk of ovarian/adnexal torsion in patients with polycystic ovaries. Ovarian/adnexal torsion seems to be a feared complication in patients with polycystic ovary syndrome. Acute lower abdominal pain in patients with known polycystic ovaries represents the most common symptom, while diagnostic assessment almost always incorporates transvaginal ultrasound and computer tomography or magnetic resonance tomography scans. In case of suspected torsion, emergency laparoscopy with ovarian or adnexal detorsion seems to be the standard therapeutic approach with a view to restitute the interrupted blood supply. In cases of repeated ovarian/adnexal torsions, ovariopexy or ovariectomy/adnexectomy had to be discussed with the patient in the context of risk recurrence minimization.

- **Retrospective study of the correlation between twin pregnancies and perinatal outcome in association to the impact of preterm birth.**

Michalopoulos S, Tsikouras P, Varlami V, Lambrinos D, Bothou A, **Nikolettos K**, Papanikolopoulou S, Marinos G, Iatrakis G, Nikolettos N.

Mater Sociomed. 2023;35(3):215-221. DOI: 10.5455/msm.2023.35.215-221. PMID: 37795161. PMCID: PMC10545924.

Περίληψη

Background: Twin pregnancies make up 2% to 4% of all births. Incidence of spontaneous twin pregnancies varies around the world, with percentages ranging from 8/1000 to >17/1000 births. The variation in twin pregnancy rates is thought to be due to dizygotic pregnancies, since monozygotic pregnancies have a consistent incidence of 3.5/1000 to 4/1000 births. The

incidence of twin pregnancies after the widespread use of assisted reproduction has increased significantly.Objective: The purpose of the present study is to investigate factors , who contribute to improve the perinatal outcome in twin pregnancies. Support will be provided by the results of twin pregnancies by the Department of Obstetrics and Gynaecology of Demokrition University of Thrace (Alexandroupolis, Greece) in the last fifteen years.Methods: From the above Department, data were collected on the number of twin pregnancies, maternal age, gestational age, mode of delivery (spontaneous delivery or caesarean section), birth weight and rate of twin pregnancies with assisted reproduction.Results: The results showed the increasing trend of twin pregnancies and births. A total of 304 twin pregnancies were identified (rate 2.75%). The rate of assisted reproduction was 34.83% in our sample, while the rate of cesarean deliveries was 95.5%, showing a large increase in recent years. In ten cases, normal delivery was successfully performed. The gestational age in twin pregnancies that ended with normal delivery was 37.37 + 3 weeks and the fetuses were both cephalic presentations. The main reason for admission of newborns to the NICU Department was prematurity. Conclusion**:** The constantly improving education of perinatalists and understanding of the pathophysiology may lead to individualization of their treatment, and improvement of their prognosis based on recent scientific data from other international centers.

- **Comparison of gut microbiome in neonates born by caesarean section and vaginal seeding with gut microbiomes of neonates born by caesarean section without vaginal seeding and neonates born by vaginal delivery.**

  Anthoulaki X, Oikonomou E, Bothou A, Papanikolopoulou S, **Nikolettos K**, Damaskos C, Garbis N, Kyriakou D, Nalbanti T, Iatrakis G, Nikolettos N, Tsikouras P.

  Mater Sociomed. 2023;35(3):234-243. DOI: 10.5455/msm.2023.35.234-243. PMID: 37795168. PMCID: PMC10545928.

  Περίληψη

  Background: Pregnancy is an admirable biological process, resulting in significant changes in many of the body's normal systems so that they can support the development of the fetus. These changes involve hormonal changes, weight gain, immune system regulation, and others that need to be synchronized to maintain both maternal and fetal health Objective: The purpose of this study was to compare gut microbiome in neonates born by caesarean section and vaginal seeding with gut microbiomes of neonates born by caesarean section without vaginal seeding and neonates born by vaginal delivery Methods: In Democritus University of Thrace, from 2019 to 2022, gut microbiomes were compared for three groups of neonates. Group A included 110 neonates born by CS who underwent vaginal seeding, group B included 85 neonates born by CS without vaginal seeding and group C included 95 neonates born by vaginal delivery. Results: Vaginal seeding in neonates born with CS resulted in gut microbiome which was similar to the gut microbiome of neonates born by vaginal delivery (including lactobacillus species and bacteroides). On the contrary, gut microbiome of neonates born by CS without vaginal seeding was "limited" Conclusion: According to our findings, vaginal seeding alters the gut microbiome of the neonates born with CS. However, there is a need for further investigation to prove its efficacy and its safety for the neonate.

- **A retrospective study of various iron preparations oral administration in pregnant women with iron deficiency anemia.**

  Bouschanetzis C, Bothou A, Oikonomou E, Kiriakou D, Papanikolopoulou S, Michalopoulos S, **Nikolettos K**, Trypsiannis G, Nikolettos N, Tsikouras P.

  Mater Sociomed. 2023;35(2):157-164. DOI: 10.5455/msm.2023.35.157-164. PMID: 37701349. PMCID: PMC10495134.

  Περίληψη

  During pregnancy anemia is a common medical condition, with iron deficiency and megaloblastic anemia being the most common. The symptoms range from very mild to severe and if left without proper medical treatment, there can be serious consequences for both mother and fetus. The most frequent pregnancy problem is anemia. The term "Iron Deficiency Anemia" refers to erythropoiesis under conditions of absolute iron deficiency. This presupposes the depletion of iron stores in the body. Iron deficiency anemia or Sideropenic anemia is the most common form of anemia worldwide. Special attention must be given to nutrition during pregnancy. In the current retrospective study, it was evaluated the contribution of various iron preparations substitution during the pregnancy and puerperium.

- **The comparative study of the administration of the combination preparation of isoflavones and hyaluronic acid in menopausal women for the treatment of the symptoms of menopause, urogenital atrophy and osteoporosis in relation to existing hormone replacement therapies.**

  Chalkidou A, Oikonomou E, Lambrinos D, Bothou A, Kyriakou D, Nikolettos K, Marinos G, Iatrakis G, Zervoudis S, Nikolettos N, Tsikouras P.

  Mater Sociomed. 2023;35(3):206-214. DOI: 10.5455/msm.2023.35.206-214. PMID: 37795159. PMCID: PMC10545921.

  Περίληψη

  Background: Menopause is characterized by a series of symptoms and effects from the various systems and organs, for which, the decline in estrogen production from the ovaries is considered responsible. Objective: The aim of this study was to make comparative study of the administration of the combination preparation of isoflavones and hyaluronic acid in menopausal women for the treatment of the symptoms of menopause, urogenital atrophy and osteoporosis in relation to existing hormone replacement therapies. Methods: In this five-year, double-blind, placebo-controlled clinical study, a total of 274 postmenopausal women were enrolled and classified into three groups. Participants in group A, were 96 women who did not receive Hormone Replacement Therapy (HRT), in the second group, 92 received daily treatment with tibolone (2.5 mg) as monotherapy, and in the third group, 86 received treatment with a pharmaceutical formulation of hyaluronic acid 120 mg and isoflavones. MF11RCE 80 mg. Results: In the postmenopausal women of our study, a significant reduction of postmenopausal symptoms was found in both groups B and C of participants who received hormone replacement preparations compared to group A who did not receive HRT.

Furthermore, no difference in efficacy was observed between the administered preparations of isoflavones and tibolone. Conclusion: The combination of isoflavones and hyaluronic acid has the same efficacy as tibolone in menopausal symptoms.

- **A proposed cytodiagnosistic approach for breast lesions.**

Garmpis N, Psilopatis I, Dimitroulis D, Garmpi A, **Nikolettos K**, Vrettou K, Damaskos C.

Maedica (Bucur). 2023;18(2):376-379. DOI: 10.26574/maedica.2023.18.2.376. PMID: 37588828. PMCID: PMC10427096.

Περίληψη

In clinical practice, the diagnosis of breast lesions is achieved by the triple approach of the specialized surgeon, radiologist and pathologist. The recommended approach to breast lesions should always include a detailed history, along with a thorough clinical examination, mammography and/or ultrasound, as well as preoperative cytodiagnosis. In this context, fine needle aspiration cytology and core needle biopsy are the methods of choice for histological diagnosis. Herein, we aim to explain why these procedures seem to be superior compared to open biopsy and we propose a cytodiagnostic algorithm for breast lesions.

- **The emerging role of histone deacetylase inhibitors in cervical cancer therapy.**

Psilopatis I, Garmpis N, Garmpi A, Vrettou K, Sarantis P, Koustas E, Antoniou EA, Dimitroulis D, Kouraklis G, Karamouzis MV, Marinos G, Kontzoglou K, Nonni A, **Nikolettos K**, Fleckenstein FN, Zoumpouli C, Damaskos C.

Cancers (Basel). 2023;15(8):2222. DOI: 10.3390/cancers15082222. PMID: 37190151. PMCID: PMC10137219.

Περίληψη

Cervical carcinoma is one of the most common cancers among women globally. Histone deacetylase inhibitors (HDACIs) constitute anticancer drugs that, by increasing the histone acetylation level in various cell types, induce differentiation, cell cycle arrest, and apoptosis. The aim of the current review is to study the role of HDACIs in the treatment of cervical cancer. A literature review was conducted using the MEDLINE and LIVIVO databases with a view to identifying relevant studies. By employing the search terms "histone deacetylase" and "cervical cancer", we managed to identify 95 studies published between 2001 and 2023. The present work embodies the most up-to-date, comprehensive review of the literature centering on the particular role of HDACIs as treatment agents for cervical cancer. Both well-established and novel HDACIs seem to represent modern, efficacious anticancer drugs, which, alone or in combination with other treatments, may successfully inhibit cervical cancer cell growth, induce cell cycle arrest, and provoke apoptosis. In summary, histone deacetylases seem to represent promising future treatment targets in cervical cancer.

- **Ovarian cancer and glutamine metabolism.**

  Fasoulakis Z, Koutras A, Ntounis T, Prokopakis I, Perros P, Chionis A, Sapantzoglou I, Katrachouras A, Konis K, Samara AA, Valsamaki A, Palios VC, Symeonidis P, **Nikolettos K**, Pagkalos A, Sotiriou S, Theodora M, Antsaklis P, Daskalakis G, Kontomanolis EN.

  Int J Mol Sci. 2023;24(5):5041. DOI: 10.3390/ijms24055041. PMID: 36902470. PMCID: PMC10003179.

  Περίληψη

  Cancer cells are known to have a distinct metabolic profile and to exhibit significant changes in a variety of metabolic mechanisms compared to normal cells, particularly glycolysis and glutaminolysis, in order to cover their increased energy requirements. There is mounting evidence that there is a link between glutamine metabolism and the proliferation of cancer cells, demonstrating that glutamine metabolism is a vital mechanism for all cellular processes, including the development of cancer. Detailed knowledge regarding its degree of engagement in numerous biological processes across distinct cancer types is still lacking, despite the fact that such knowledge is necessary for comprehending the differentiating characteristics of many forms of cancer. This review aims to examine data on glutamine metabolism and ovarian cancer and identify possible therapeutic targets for ovarian cancer treatment.

- **Portal vein thrombosis after C-section in a patient with polycythemia vera (PV) due to pregnancy and iron deficiency anemia (IDA).**

  Ntounis T, Zioutos KA, Koutras A, Prokopakis I, Fasoulakis Z, Sapantzoglou I, Perros P, Samara AA, Spanoudakis E, Valsamaki A, Krouskou SE, **Nikolettos K**, Palios VC, Mousios P, Goula K, Konis K, Chionis A, Kontomanolis EN.

  Clin Pract. 2022;12(6):1069-1077. DOI: 10.3390/clinpract12060109. PMID: 36547117. PMCID: PMC9776423.

  Περίληψη

  Polycythemia vera (PV) is one of the three main classic disorders of Philadelphia-negative myeloproliferative neoplasms (MPNs), with the other two being essential thrombocythemia (ET) and primary myelofibrosis (PMF). PV may develop (15%) in women of childbearing age (15–45 years), with an anticipated rate of roughly 0.3 per 100,000 people, although maintaining a male to female ratio predominance of about 2:1 and a peak prevalence in the sixth and seventh decades of life. Without always being presented with its actual clinical manifestations due to pregnancy itself, and most commonly due to iron deficiency, PV can be frequently missed and therefore belatedly diagnosed. We describe the case of a primipara woman in her 40s, without risk factors for thrombosis, who developed a portal vein occlusion 1.5 month postpartum after C-section and who had a delayed diagnosis of PV.

- **Life quality in premenopausal women after embolization of uterine myomas.**

Tsikouras P, Gkaitatzi F, Gerede A, Anthoulaki X, Bothou A, Chalkidou A, Michalopoulos S, Tsirkas I, Gyroglou S, Peitsidis P, **Nikolettos K**, Alexiou A, Dragoutsos G, Sachnova N, Chloropoulou P, Zervoudis S, Iatrakis G, Rath W, Trypsiannis G, Nikolettos N, Souftas V.

J Pers Med. 2022;12(12):1990. DOI: 10.3390/jpm12121990. PMID: 36556210. PMCID: PMC9786225.

Περίληψη

Objectives**:** Fibroids cause significant morbidity and are the most common indication for hysterectomies worldwide, delimiting a major public health problem. Uterine artery embolization (UAE) is an alternative therapy to surgical treatment of symptomatic fibroids; it has satisfactory long-time results and is no longer considered investigational for the treatment of symptomatic fibroids. This study was undertaken to evaluate changes in fibroid specific symptom severity and health-related quality of life (HRQOL) after UAE and to optimize the assessment of safety and outcomes measures for participants who receive UAE to objective compare UAE and surgical alternatives for therapy of symptomatic fibroids. Study design**:** The analysis was based on questionnaires completed by 270 pre-menopausal females with a mean age of 42 years (range, 38–50 years) who underwent UAE for uterine leiomyomas and/or adenomyosis from November 2013 through December 2019. Only symptomatic women were selected whose symptoms were not improving with medication and who did not wish to have children. The primary outcome measure was a change in fibroid symptoms and HRQOL (health related quality of life) after UAE. Secondary outcomes included the decrease in uterine volume after UAE. Results: Questionnaires were completed by 270 women (100%) at a mean of 12.1 months from UAE. The median follow-up period was two years. Uterine fibroid embolization led to a shrinkage at three months for the 90% of the participants. A reduction of bleeding symptoms, pain and bulk-related symptoms was observed in 89.7%, 88.9%, and 89.5% of the patients, respectively. In the long term, there was no significant difference in parameters assessed compared with the midterm follow-up findings. A total of 6 patients (2.3%) underwent fractional curettage an average of 32.1 months after intervention due to necrotic changes in submucosal fibroids. All participants continued to be satisfied with the intervention, and 240 patients (88.9%) answered that they would recommend uterine fibroid embolization to other patients. Conclusions: Women who undergo UAE have a significant decrease in symptom severity and increase in HRQOL which is associated with high levels of satisfaction with the procedure (even when subsequent therapies are pursued).

- **Pregnancy and COVID-19.**

Ntounis T, Prokopakis I, Koutras A, Fasoulakis Z, Pittokopitou S, Valsamaki A, Chionis A, Kontogeorgi E, Lampraki V, Peraki A, Samara AA, Krouskou SE, **Nikolettos K**, Papamichalis P, Psarris A, Pergialiotis V, Theodora M, Antsaklis P, Daponte A, Daskalakis G, Kontomanolis EN.

J Clin Med. 2022;11(22):6645. DOI: 10.3390/jcm11226645. PMID: 36431122. PMCID: PMC9695358.

Περίληψη

Evidence indicates that SARS-CoV-2 infection increases the likelihood of adverse pregnancy outcomes. Modifications in the circulatory, pulmonary, hormonal, and immunological pathways induced by pregnancy render pregnant women as a high-risk group. A growing body of research shows that SARS-CoV-2 infection during pregnancy is connected to a number of maternal complications, including pneumonia and intensive care unit (ICU) hospitalization. Miscarriages, stillbirth, preterm labor, as well as pre-eclampsia and intrauterine growth restriction are also among the most often documented fetal implications, particularly among expecting women who have significant COVID-19 symptoms, often affecting the timing and route of delivery. Thus, prevention of infection and pharmacological treatment options should aim to minimize the aforementioned risks and ameliorate maternal, obstetric and fetal/neonatal outcomes.

- **Mastitis and risk of breast cancer: A case control-retrospective study and mini-review.**

  Bothou A, Zervoudis S, Pappou P, Tsatsaris G, Gerede A, Dragoutsos G, Chalkidou A, **Nikolettos K**, Tsikouras P.

  Maedica (Bucur). 2022;17(3):602-606. DOI: 10.26574/maedica.2022.17.3.602. PMID: 36540583. PMCID: PMC9720655.

  Περίληψη
  Objective: To investigate a possible association between mastitis and breast cancer risk in a cohort of Greek women. Material and methods: A series of 343 women who visited two breast clinics in Greece and delivered live neonates were studied in our case-control retrospective study. The case group comprised women with breast cancer and the control group women without breast cancer. All participants were subjected to a clinical examination with breast ultrasound and those aged over 40 years underwent digital bilateral mammography. Results: The $\chi 2$ (chi-square) test was the statistical tool used by us. We noted a statistically significant relationship between mastitis and risk for breast cancer ($p=0.04$). Moreover, the relative risk for breast cancer among patients with mastitis was RR: 2.069. Conclusion: Our study showed a relation between mastitis and breast cancer. Mastitis could be a potential risk factor. Further studies with larger number of patients are mandatory in order to confirm this possible relationship.

- **BRCA 1, 2 mutation and earlier menopause: Could BRCA 1,2 be used as predictor of menopause?**

  Nikolettos K, Damaskos C, Garmpis N, Nikolettos N.

  Minerva Obstet Gynecol. 2022;74(2):165-170. DOI: 10.23736/S2724-606X.21.04813-2. PMID: 34137566.

  Περίληψη
  Introduction: Many studies have shown that BRCA mutation is not only related to cancer but also to ovarian aging. Studies in both human and mice oocytes have shown that Double-strand breaks (DSBs) accumulate with age. Evidence acquisition: A review of the literature was

completed through the PubMed database aiming to find articles regarding BRCA 1,2 mutation and if they are related to early menopause in order to use them as predictive biomarkers in the near future. The research used keywords in numerous combinations, such as "BRCA 1,2 mutation," "menopause," "ovarian reserves," "AMH," "genome-wide association studies," and "biomarkers." The literature was limited in this specific topic. The initial research found 16 screened articles, 7 of which were not included because there were not relevant, as far as publications in non-English language. Evidence synthesis: Genome-wide association studies (GWAS) have found 44 genetic loci that are related to variations when a female is about to have menopause. BRCA1 is involved in these 44 loci that are associated with the age of menopause. This review has gathered all results of literature search about the association between BRCA genes and early menopause. Most of the articles found that women with BRCA mutation have earlier menopause compared to non-carriers. Conclusions: In conclusion, in the near future BRCA1,2 genes could be used as predictive biomarkers of menopause.

- **Comment on renal auto transplantation: A final option to preserve the kidney after an iatrogenic ureteral injury.**

Damaskos C, Garmpis N, **Nikolettos K,** Patsouras A, Schizas D, Garmpi A, Georgakopoulou VE, Syllaios A, Dimitroulis D.

Arch Ital Urol Androl. 2021;93(4):497-498. DOI: 10.4081/aiua.2021.4.497. PMID: 34933543.

Περίληψη

To the Editor, Autologous Renal Transplantation (ART) since firstly described in 1963 by Hardy, has been used in various cases. There are various reasons for the transplantation such as iatrogenic ureteral damage, chronic kidney pain, unresectable renal tumors or renovascular diseases. Indications concerning the suitable patients for this kind of procedure are gradually increasing. Nevertheless, each case is unique, and the treatment must be personalized.

- **Impact of SARS-CoV-2 on pregnancy outcomes (Review).**

Tsikouras P, Kourti V, Gerede A, Kiosse E, Panopoulou M, Zervoudis S, Bothou A, Iatrakis G, Gaitatzi F, Vatsidou X, Chalkidou A, **Nikolettos K**, Alexiou A, Peitsidis P, Lambropoulou M, Michalopoulos S, Nikolettos N, Rafailidis P.

Med Int (Lond). 2021;1(5):19. DOI: 10.3892/mi.2021.19. PMID: 36698529. PMCID: PMC9829087.

Περίληψη

The impact of the pandemic outbreak associated with coronavirus 2019 disease (COVID-19) on pregnant women is of interest to obstetricians and gynecologists due to the vulnerability of this target group. In pregnant women and their infants, an exceptional clinical management is warranted. Current epidemiological findings provide information regarding the effects of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) on pregnant patients and potential adverse perinatal outcomes. Overall, these findings are a strong indication that an

increased antenatal surveillance for pregnant patients infected with COVID-19 is warranted. The aim of the present narrative review was to summarize the data obtained to date regarding the health of women during pregnancy, as well as that of the fetus associated with the risk of severe infection due to COVID-19. The present review aimed to provide further insight into the effects of this pandemic on pregnancy, also providing the experience of the authors on this matter as an example.

- **The role of uterine natural killer cells on recurrent miscarriage and recurrent implantation failure: From pathophysiology to treatment.**

Sfakianoudis K, Rapani A, Grigoriadis S, Pantou A, Maziotis E, Kokkini G, Tsirligkani C, Bolaris S, **Nikolettos K**, Chronopoulou M, Pantos K, Simopoulou M.

Biomedicines. 2021;9(10):1425. DOI: 10.3390/biomedicines9101425. PMID: 34680540. PMCID: PMC8533591.

Περίληψη

Uterine natural killer (uNK) cells constitute a unique uterine leucocyte subpopulation facilitating implantation and maintaining pregnancy. Herein, we critically analyze current evidence regarding the role of uNK cells in the events entailed in recurrent implantation failure (RIF) and recurrent miscarriages (RM). Data suggest an association between RIF and RM with abnormally elevated uNK cells' numbers, as well as with a defective biological activity leading to cytotoxicity. However, other studies do not concur on these associations. Robust data suggesting a definitive causative relationship between uNK cells and RIF and RM is missing. Considering the possibility of uNK cells involvement on RIF and RM pathophysiology, possible treatments including glucocorticoids, intralipids, and intravenous immunoglobulin administration have been proposed towards addressing uNK related RIF and RM. When considering clinical routine practice, this study indicated that solid evidence is required to report on efficiency and safety of these treatments as there are recommendations that clearly advise against their employment. In conclusion, defining a causative relationship between uNK and RIF–RM pathologies certainly merits investigation. Future studies should serve as a prerequisite prior to proposing the use of uNK as a biomarker or prior to targeting uNK cells for therapeutic purposes addressing RIF and RM.

- **PGT-A: Who and when? A systematic review and network meta-analysis of RCTs**.

Simopoulou M, Sfakianoudis K, Maziotis E, Tsioulou P, Grigoriadis S, Rapani A, Giannelou P, Asimakopoulou M, Kokkali G, Pantou A, **Nikolettos K**, Vlahos N, Pantos K.

J Assist Reprod Genet. 2021;38(8):1939-1957. DOI: 10.1007/s10815-021-02227-9. PMID: 34036455. PMCID: PMC8417193.

Περίληψη

Purpose: Wide controversy is still ongoing regarding efficiency of preimplantation genetic testing for aneuploidy (PGT-A). This systematic review and meta-analysis, aims to identify the patient age group that benefits from PGT-A and the best day to biopsy. Methods: A systematic

search of the literature was performed on MEDLINE/PubMed, Embase and Cochrane Central Library up to May 2020. Eleven randomized controlled trials employing PGT-A with comprehensive chromosomal screening (CCS) on Day-3 or Day-5 were eligible. Results: PGT-A did not improve live-birth rates (LBR) per patient in the general population (RR:1.11; 95%CI:0.87-1.42; n=1513; I 2 =75%). However, PGT-A lowered miscarriage rate in the general population (RR:0.45; 95%CI:0.25-0.80; n=912; I2 =49%). Interestingly, the cumulative LBR per patient was improved by PGT-A (RR:1.36; 95%CI:1.13-1.64; n=580; I2 =12%). When performing an age-subgroup analysis PGT-A improved LBR in women over the age of 35 (RR:1.29; 95%CI:1.05-1.60; n=692; I 2 =0%), whereas it appeared to be ineffective in younger women (RR:0.92; 95%CI:0.62-1.39; n=666; I2 =75%). Regarding optimal timing, only day-5 biopsy practice presented with improved LBR per ET (RR: 1.37; 95% CI: 1.03-1.82; I2 =72%). Conclusion: PGT-A did not improve clinical outcomes for the general population, however PGT-A improved live-birth rates strictly when performed on blastocyst stage embryos of women over the 35-year-old mark.

- **Investigational drug treatments for triple-negative breast cancer.**

Damaskos C, Garmpis N, Garmpi A, **Nikolettos K**, Sarantis P, Georgakopoulou VE, Nonni A, Schizas D, Antoniou EA, Karamouzis MV, Nikolettos N, Kontzoglou K, Patsouras A, Voutyritsa E, Syllaios A, Koustas E, Trakas N, Dimitroulis D.

J Pers Med. 2021;11(7):652. DOI: 10.3390/jpm11070652. PMID: 34357119. PMCID: PMC8303312.

Περίληψη

Triple-negative breast cancer (TNBC) is an aggressive subtype of breast cancer (BC) and accounts for 10–20% of cases. Due to the lack of expression of several receptors, hormone therapy is largely ineffective for treatment purposes. Nevertheless, TNBC often responds very well to chemotherapy, which constitutes the most often recommended treatment. New beneficial targeted therapies are important to be investigated in order to achieve enhanced outcomes in patients with TNBC. This review will focus on recent therapeutic innovations for TNBC, focusing on various inhibitors such as phosphoinositide 3-kinase (PI3K) pathway inhibitors, poly-ADP-ribosyl polymerase (PARP) inhibitors, aurora kinase inhibitors, histone deacetylase inhibitors (HDACIs), and immune checkpoint inhibitors.

- **HPV induced tongue cancer in pregnancy: Diagnosis and the role of vaccination in management.**

Tsikouras P, Bothou A, Paraskevopoulos K, Anthoulaki X, Chalkidou A, Tsirkas I, Gaitatzi F, Koutsogiannis M, Stavroglou A, Lazarou A, Dragoutsos G, **Nikolettos K**, Petsidis P, Zervoudis S, Iatrakis G, Galazios G, Astridis I, Nikolettos N, Vahtsevanos K.

Clin Obstet Gynecol Reprod Med. 2020;6:1-7. DOI: 10.15761/COGRM.1000310.

Περίληψη

Oral cancer is frequently a squamous cell carcinoma. In Western countries it is more commonly found on the tongue and consists one of the most common malignancies in the oral mucosa. The exact causes of squamous cell carcinoma are not known. There are many risk factors such as chemical, biological, natural and other related to culture, habits, customs and traditions, religion and environmental influences at the national level and differ in different nations. Biological agents are viruses (such as the herpes simplex virus, HPV, HIV) and mycoses. Human papillomavirus (HPV), especially HPV subtype 16, is on the rise in young people with oral cancer who are not smokers. Epidemiological studies throughout world with the help of molecular techniques undoubtedly show the crucial importance of human papillomavirus (HPV) in growth squamous cell carcinoma. The sensitive anatomical unit of the tongue in cases of malignancy in pregnant women creates significant bioethical concerns that must be addressed with delicacy, discernment and responsibility by the oncology medical team. The contribution of the 9 valent vaccination, which provides protection against this oncogenic subtype of HPV 16 associated with squamous cell carcinoma, is likely to be valuable to young women and men, and may be recommended after future studies during pregnancy

- **Association between BRCA 1, BRCA 2 and ovarian reserve: Current evidence and future possibilities via a review of the literature.**

Nikolettos K, Damaskos C, Garmpis N, Tsikouras P, Zervoudis S, Iatrakis G, Nikolettos N.

Obstet Gynecol Res. 2020;3(1):29-36. DOI: 10.26502/ogr032.

Περίληψη

A great amount of studies had shown already that BRCA 1 and BRCA 2 mutations are related with breast and ovarian cancer. BRCA1 plays an important role in maintaining genome integrity, at least in part, through its roles in DNA damage repair. DNA damage can happen in both single-strand DNA breaks and double-strand DNA breaks (DSBs). Because DSBs can affect both copies of a gene, they can result in mutagenesis, carcinogenesis, cell senescence, or apoptotic cell death.BRCA1 and BRCA2 genes belong to the family of ataxia-telangiectasia-mutated (ATM)-mediated DNADSB repair genes. It plays a critical role in the safeguarding of DNA integrity. Some studies showed that DSBs accumulate with age and contribute to reproductive aging in mice and women. It was observed that females with BRCA mutations, undergoing fertility preservation, have lower response rates to ovarian stimulation. Furthermore, some studies came to the conclusion that females with BRCA mutations may have earlier menopause compared with non-carriers. The results vary and we cannot have a solid answer ifBRCA1 and BRCA2 mutations play a significant role in the ovarian reserve. The majority of the studies with sufficient sample size and/or which are prospective in nature, supports that ovarian reserve is decreased in women with BRCA1 mutations, although not all the studies agreed with this conclusion. The aim of this work is to review the literature pertaining to this issue. evidence shows that mutations in other DNA repair genes are linked to breast and other cancer types. Most of families with many different cases of breast and ovarian cancer have inherited mutations in BRCA1 andBRCA2. The cumulative life-time risks of ovarian cancer related with these genes was around 40–53% for a BRCA1 mutation carriers and 20-30% inBRCA2 carriers, although, these risk estimates appear to differ between researches.

- **Family planning laboratory review of factors affecting the choice of contraceptive methods in three teenagers' populations in Thrace, Greece.**

  Tsikouras P, Galazios G, Anthoulaki X, Chalkidou A, Bothou A, Deuteraiou T, Koutsogiannis M, Babageorgaka I, Gaitatzi F, **Nikolettos K**, Zervoudis S, Nikolettos N.

  Arch Obstet Gynaecol. 2020;1(1):13-22. DOI: 10.33696/Gynaecology.1.003.

  Περίληψη

  Contraception encompasses the concept of avoiding a pregnancy, and is aimed at women of reproductive age who, although are sexually active, do not want to achieve any pregnancy at their option fertility preservation and family planning. It should be underlined that no method of contraception is 100% guaranteed because its success depends on many factors such as patient's compliance to gynecologists instructions, woman's age, the advantages and disadvantages of each method, the frequency of sexual intercourse and of course the type of contraception. Proper use of each method requires knowledge. Contraception is not enough, but it should be done properly to avoid unwanted pregnancy. Fortunately, contraceptive methods nowadays are many, simple to implement and extremely effective. In a society that is constantly evolving as technology advances, there is a profound humanitarian crisis at all levels, where human values and even human lives are violated. Family Planning protects and promotes the rights of both the woman and her unborn child, an unborn human being inside the womb. In this day and age that the number of abortions increases disproportionately to the number of births every person and especially teenage women, as the weaker sex in many subpopulation groups, have the right to be informed, protected and supported by the family planning centers.

- **Evaluating the value of day 0 of an ICSI cycle on indicating laboratory outcome.**

  Maziotis E, Sfakianoudis K, Giannelou P, Grigoriadis S, Rapani A, Tsioulou P, **Nikolettos K**, Pantou A, Tiptiri-Kourpeti A, Koutsilieris M, Asimakopoulos B, Nikolettos N, Pantos K, Simopoulou M.

  Sci Rep. 2020;10(1):19325. doi: 10.1038/s41598-020-75164-9. PMID: 33168856. PMCID: PMC7653966

  Περίληψη

  A number of oocyte characteristics have been associated with fertilization, implantation and live-birth rates, albeit without reaching a consensus. This study aims to delineate possible associations between oocyte characteristics, oocyte behavior during intracytoplasmic sperm injection (ICSI), fertilization potential, and laboratory outcomes. Four-hundred and seventy-seven patients, yielding 3452 oocytes, were enrolled in this prospective observational study from 2015 to 2018. Ooplasm granularity was associated with poor embryo quality and higher probabilities of post-ICSI oocytes and embryos discarded in any developmental stage and never selected for embryo transfer or cryopreservation ($p < 0.001$). Both sudden or difcult ooplasm aspiration, and high or lack of resistance during ICSI were associated with either a poor Zygote-Score or fertilization failure ($p< 0.001$). Sudden or difcult ooplasm aspiration and high resistance during ICSI penetration were positively associated with resulting to a post-ICSI

oocyte or embryo that would be selected for discard. Evaluation of oocyte characteristics and oocyte behavior during ICSI may provide early information regarding laboratory and cycle outcomes. Particularly, ooplasm granularity, and fragmentation of polar body, along with sudden or difcult ooplasm aspiration and high or lack of resistance during ICSI penetration may hinder the outcome of an ICSI cycle. The associations presented herein may contribute towards development of a grading system or a prediction model. Taking into account information on oocytes and ICSI behavior may efectively assist in enhancing IVF outcome rates.

- **Molecular classification and future therapeutic challenges of triple-negative breast cancer.**

Garmpis N, Damaskos C, Garmpi A, **Nikolettos K**, Dimitroulis D, Diamantis E, Farmaki P, Patsouras A, Voutyritsa E, Syllaios A, Zografos CG, Antoniou EA, Nikolettos N, Kostakis A, Kontzoglou K, Schizas D, Nonni A.

Anticancer Res. 2019;39(10):5285-5296. DOI: 10.21873/anticanres.13722. PMID: 31570423.

Περίληψη

Triple-negative breast cancer (TNBC) is an extremely diverse group of breast tumors, with aggressive clinical behavior, higher rates of distant recurrence and worse overall survival compared to other types of breast cancers. The genetic, transcriptional histological and clinical heterogeneity of this disease has been an obstacle in the progression of targeted therapeutic approaches, as a ubiquitous TNBC marker has not yet been discerned. In terms of that, current studies focus on the classification of TNBC tumors in subgroups with similar characteristics in order to develop a treatment specialized for each group of patients. To date, a series of gene expression profiles analysis in order to identify the different molecular subtypes have been used. Complementary DNA microarrays, PAM50 assays, DNA and RNA sequencing as well as immunohistochemical analysis are some of the methods utilized to classify TNBC tumors. In 2012, the Cancer Genome Atlas (TCGA) Research Network conducted a major analysis of breast cancers using six different platforms, the genomic DNA copy number arrays, DNA methylation, exome sequencing, messenger RNA arrays, microRNA sequencing and reverse-phase protein arrays, in order to assort the tumors in homogenous subgroups. Since then, an increasing number of breast cancer data sets are being examined in an attempt to distinguish the classification with biological interpretation and clinical implementation. In this review, the progress in molecular subtyping of TNBC is discussed, providing a brief insight in novel TNBC biomarkers and therapeutic strategies.

- **Triple-negative breast cancer: The progress of targeted therapies and future tendencies.**

Damaskos C, Garmpi A, **Nikolettos K**, Vavourakis M, Diamantis E, Patsouras A, Farmaki P, Nonni A, Dimitroulis D, Mantas D, Antoniou EA, Nikolettos N, Kontzoglou K, Garmpis N.

Anticancer Res. 2019;39(10):5285-5296. DOI: 10.21873/anticanres.13722. PMID: 31570423.

Περίληψη

Triple-negative breast cancer (TNBC) is characterized by a lack of expression of estrogen receptor (ER), progesterone receptor (PR) and human epidermal growth factor receptor 2 (HER2) and unfortunately is not associated with good prognosis. Treatment of breast cancer mainly depends on chemotherapy, due to the lack of specifically approved targeted therapies for TNBC. It is of paramount importance to find new therapeutic approaches, as resistance to chemotherapy frequently occurs. Herein, we present clinical studies published within the last five years, in order to reveal possible targeted therapies against TNBC. We aimed to discuss factors against TNBC, such as tyrosine kinase inhibitors, anti-androgens, poly ADP-ribose polymerase-1 (PARP-1) inhibitors, anti-angiogenic factors, immune checkpoints and histone deacetylase inhibitors (HDACI). Furthermore, the PI3K/AKT/mTOR pathway seems to be a promising field for the development of new anti-TNBC targeted therapies. Data from 18 clinical trials with patients suffering from TNBC were summarized and presented descriptively.

- **Should the flexibility enabled by performing a day-4 embryo transfer remain as a valid option in the IVF laboratory? A systematic review and network meta-analysis.**

Simopoulou M, Sfakianoudis K, Tsioulou P, Rapani A, Maziotis E, Giannelou P, Grigoriadis S, Pantou A, **Nikolettos K**, Vlahos N, Pantos K, Koutsilieris M.

J Assist Reprod Genet. 2019;36(6):1049-1061. DOI: 10.1007/s10815-019-01475-0. PMID: 31111304. PMCID: PMC6603118.

Περίληψη

Purpose: The present systematic review and network meta-analysis aims to uniquely bring to literature data supporting the true place of the alternative practice of day-4 embryo transfer (D4 ET) in an IVF laboratory, beyond the one-dimensional option of facilitating a highly demanding program. Methods: A systematic search was conducted in the databases of PubMed/Medline, Embase, and Cochrane Central Library, resulting to six prospective along with nine retrospective cohort studies meeting eligibility criteria for inclusion. A comparison of D4 ET with day-2 (D2), day-3 (D3), and day-5 (D5) ET, respectively, was performed employing R statistics. Results: The sourced results indicate no statistically significant difference regarding clinical pregnancy rates, and ongoing pregnancy/live birth rates stemming from the comparison of D4 with D2, D4 with D3, and D4 with D5 ET, respectively. Additionally, no statistically significant difference could be established in respect to cancelation, and miscarriage rates, following the comparison of D4 with D3 and D4 with D5 ET. Interestingly, we report statistically significant lower preterm birth rates associated with D4 ET, in contrast with D5 ET (RR, 0.19; 95% CI, 0.05–0.67; p value = 0.01). Conclusions: The aforementioned results may serve as advocates buttressing the option of D4 ET as a valid candidate in the ET decision-making process. Possible limitations of the current study are the publication bias stemming from the retrospective nature of certain included studies, along with various deviations among studies' design, referring to number and quality of transferred embryos, or different culture conditions referring to studies of previous decades.

- **The use of serum anti-Mullerian hormone (AMH) levels and antral follicle count (AFC) to predict the number of oocytes collected and availability of embryos for cryopreservation in IVF.**

Kotanidis L, **Nikolettos K**, Petousis S, Asimakopoulos B, Chatzimitrou E, Kolios G, Nikolettos N.

Endocrinol Invest. 2016;39(12):1459-1464. DOI: 10.1007/s40618-016-0521-x. PMID: 27465668.

Περίληψη

Aim: To investigate the predictive value of anti-Mullerian hormone (AMH) and antral follicle count (AFC) on the final number of oocytes retrieved and the availability of embryos for cryopreservation in in vitro fertilization (IVF) cycles. Patients and methods: In this prospective study, one hundred and twenty women in their first IVF treatment were enrolled. The short stimulation agonist protocol was used for controlled ovarian hyperstimulation in all cases. Serum AMH levels were measured during the menstrual cycle preceding treatment. AFC was measured in cycle day 2, just before starting ovarian stimulation. Results: A strong, positive correlation between AMH, AFC and the number of collected oocytes was found. The patients with available and suitable supplementary embryos for cryopreservation had higher levels of AMH and larger numbers of AFC. Conclusion: AMH and AFC appear to be valuable markers mainly for ovarian reserve and response to IVF treatment. Serum AMH levels and AFC are significantly associated with the number of retrieved oocytes. Also, a positive correlation with the availability of supernumerary embryos suitable for cryopreservation was observed.

Ελληνικές

- **Στοχευμένες θεραπείες για τον τριπλά αρνητικό καρκίνο του μαστού: Ερευνητικά δεδομένα και μελλοντικές προοπτικές.**

Γαρμπής Ν, Δαμάσκος Χ, Γαρμπή Α, **Νικολέττος Ν,** Βαβουράκης Μ, Κόντζογλου Κ, Μαντάς Δ.

Τα Νέα της ΕΧΕΜ. 2019;9:21-30.

Περίληψη

Ο τριπλά αρνητικός καρκίνος του μαστού (TNBC) χαρακτηρίζεται από έλλειψη έκφρασης υποδοχέων οιστρογόνων (ER), υποδοχέα προγεστερόνης (PR) και υποδοχέα ανθρώπινου επιδερμικού αυξητικού παράγοντα 2 (HER2) και σχετίζεται με κακή πρόγνωση. Η θεραπεία του TNBC ακόμα και σήμερα, βασίζεται κυρίως στη χημειοθεραπεία, λόγω έλλειψης στοχευμένων θεραπειών. Είναι εξαιρετικά σημαντικό να βρούμε νέες θεραπευτικές προσεγγίσεις. Η θεραπεία του TNBC αποτελεί ιδιαίτερης αξίας θεραπευτική πρόκληση.

Συγγράμματα

- **Breast cancer detection with emerging imaging technologies.**

Tsikouras P, Iatrakis G, Bothou A, Zervoudis S, Oikonomou E, **Nikolettos K**, Kyriakou D, Nalbanti T, Kritsotaki N, Kotanidou S, Spanakis V, Sotiris A, Chatzi Ismail Mouchterem A, Damaskos C, Garmpis N, Nikolettos N. In: Breast imaging - Characteristics and emerging technologies. Wang L (Eds).

IntechOpen, **Υπό έκδοση**.

Περίληψη

In light of the limitations of mammography, ultrasound, and breast MRI, some other breast imaging techniques have recently been investigated to reduce false positive rates and raise breast cancer detection including: 1) digital breast tomosynthesis, 2) bilateral contrast-enhanced dual-energy digital mammography, 3) abbreviated breast MRI, 4) magnetic resonance spectroscopy and 5) ductoscopy. The purpose of this review was to examine the advantages and disadvantages of these five different breast cancer imaging techniques.

- **The contribution of isoflavones in menopausal symptomatic as alternative treatment option.**

Tsikouras P, Chalkidou A, Iatrakis G, Oikonomou E, Bothou A, Kyriakou D, Ismail Chatzi Mouchterem A, Alexiou A, **Nikolettos K**, Kritsotaki N, Nalbanti T, Kotanidou, S, Zervoudis S, Nikolettos N. In: Women's Health Problems - A Global Perspective. Kabir R, Parsa AD, Lakhno IV (Eds).

IntechOpen, 2024. DOI: 10.5772/intechopen.114215.

Περίληψη

Menopause should be treated as a state of alteration of estrogen metabolism. It is characterized by a decrease in progesterone and an increase in estrogen followed by a drop in estrogen. The purpose of this study is to investigate the activity of hyaluronic acid 120 mg and isoflavones MF11RCE 80 mg, in the recovery of the symptoms of menopause and the treatment of its secondary complications such as osteoporosis, urogenital atrophy and accompanying urinary incontinence and vasomotor syndrome MF11RCE isoflavones are widely used to treat various disorders related mainly to women's health and mainly osteoporosis and menopausal discomforts, based on epidemiological studies that brought the above diseases to a lower percentage, in populations with a high consumption of these plant estrogens. Isoflavones are derived from plants and structurally or functionally resemble endogenous-natural estrogens and their active metabolites. Therefore, they have significant estrogenic (agonistic/ antagonistic) activity.

- **Vaginal seeding in term cesarean section is a mandatory condition for improvement of neonatal health.**

Tsikouras P, Anthoulaki X, Oikonomou E, Bothou A, **Nikolettos K**, Alexiou A, Kyriakou D, Nalbanti T, Kotanidou S, Kritsotaki N, Sahnova N, Chatzi Ismail A, Spanakis V, Iatrakis G, Nikolettos N. In: Childbirth - Clinical assessment, methods, and management. Tsikouras P, Von Tempelhoff GF, Nikolettos N, Rath W (Eds).

IntechOpen, 2023. DOI: 10.5772/intechopen.114043.

Περίληψη

The human vaginal microbiota is an important component of the defence system to fight microbial and viral infections. During pregnancy, a significant decrease in overall diversity is observed in the vaginal flora, and there is an increase in stability as the composition of the vaginal flora changes gradually. These alterations are linked toa decrease in vaginal pH and an augmentation in vaginal secretions. The composition of the vaginal microbiome changes according to gestational age, with its composition in advanced weeks of pregnancy resembling that of nonpregnant women. There is supporting evidence for the existence of differences in the neonate's microbiome between those born via C-section and those delivered vaginally. The evidence suggests that this difference is a result of the changes that occur in the mother's microbiome, particularly in the vagina. The vaginal microbiome serves as a crucial barrier between the external environment and the intra-amniotic cavity. The vaginal microbiome appears to play a significant role as an additional defence mechanism of the mother and, consequently, the fetus. Any abnormalities in this microbiome can potentially impact the pregnancy and perinatal outcome.

- **Cervical length and perinatal outcome.**

Tsikouras P, Charmanidou T, Filiou S, Iatrakis G, Bothou A, Oikonomou E, Kyriakou D, Chatzi Ismail Mouchterem A, Alexiou A, **Nikolettos K**, Kritsotaki N, Nalbanti T, Nikolettos N. In: Childbirth - Clinical assessment, methods, and management. Tsikouras P, Von Tempelhoff GF, Nikolettos N, Rath W (Eds).

IntechOpen, 2023. DOI: 10.5772/intechopen.113835.

Περίληψη

Prematurity nowadays has taken on significant dimensions. It is a complex medical issue with socio-economic consequences. The estimation of cervical length, assessed during the second trimester of pregnancy, using transvaginal ultrasound, may help to reduce rates of prematurity. By predicting the risk of preterm birth and identifying women who are at high risk of preterm birth, certain practices could be implemented, such as the use of progesterone or cerclage placement. Nonetheless, it remains unsolved the question of certain strategies, such as the use of progesterone in pregnant women with shortened cervical lengths. This work examines the relationship of cervical length during pregnancy to the perinatal outcome.

- **Emergency contraception. Literature review. Experience in a Greek center. Greece used methods.**

Tsikouras P, Hatzilazarou A, Bothou A, Oikonomou E, Kyriakou D, Kassapi A, Alexiou A, Arabatzis J, Georgada M, Nalbanti T, Sachnova, N, **Nikolettos K**, Iatrakis G, Nikolettos N. In: Conception and family planning - New aspects. Tsikouras P, Von Tempelhoff GF, Nikolettos N, Rath W (Eds).

IntechOpen, 2023. DOI: 10.5772/intechopen.113112.

Περίληψη

The sexual liberation of women can now be taken for granted, and access to information is particularly easy, but even today there is still many lack of information about contraceptive methods. No method of contraception has a 100% guaranteed result as success depends on many factors such as faithful adherence to the instructions of family planning centers, age of the woman, the frequency of the sexual act, and of course the type of contraception. Emergency contraception refers to any method of contraception used after intercourse and before implantation. It differs from the medical termination of pregnancy, which has 75–89% effectiveness and copper IUDs. Contraception is used to stop the sperm from fertilizing the egg or to stop the fertilized egg from implantation in the uterus. All contraceptive methods require educational awareness and emergency contraception should not be used as normal contraceptive treatment. It does not fall into the sphere of moral dilemmas if it is taught correctly at the levels of primary and secondary education and in the family sphere. Undoubtedly, the organization of family planning centers for women of reproductive age as well as for teenagers is deemed necessary and should become apriority of every government.

- **Uterine embolization as a new treatment option in adenomyosis uteri.**

Tsikouras P, Gaitatzi F, Filiou S, Michalopoulos S, Gerede A, Tsalikidis C, Zervoudis S, Bothou A, Vatsidou X, Chalkidou A, Dragoutsos G, Tsirkas I, **Nikolettos K**, Alexiou A, Babageorgaka I, Sachnova N, Panagiotopoulos N, Nalbanti T, Simeonidis P, Kritsotaki N, Stylianou C, Vasilopoulos A, Perende S, Peitsidis P, Nikolettos N, Souftas V. In: Endometriosis - Recent advances, new perspectives and treatments. Gonçalves GA (Ed).

IntechOpen, 2022. DOI: 10.5772/intechopen.101480.

Περίληψη

Adenomyosis is characterized by the development of endometrial ectopic glands and tissue in the myometrium layer in depth greater than 2.5 mm from the endometrial surface of the separative area by -myomas well as by hypertrophy and hyperplasia of the smooth muscles of the myometrium. This is filtration, not mere displacement, of the myometrium, from the endometrium. Clinical symptoms include dysmenorrhea and menorrhagia. It is diffuse (adenomyosis) or focal (adenomyoma), asymmetrically affects the uterine wall of premenopausal women (usually the posterior) and often coexists with myomas. The pathogenesis of adenomyosis remains unknown. The treatment options are: drug therapy, invasive treatment of fibroids: myomectomy (open—intra-abdominal, laparoscopic, hysteroscopic), hysterectomy, myolysis—cryocatalysis, microwave or radiofrequency thermal catalysis (RF-ablation), ultrasound focus catalysis (FUS), laser photocatalysis and percutaneous selective uterine artery embolization (UAE). Embolization remains an alternative and not a substitute of hysterectomy. The medical indication is made on a case-by-case basis, depending on age, desire for pregnancy and the clinical symptoms of adenomyosis.

- **Antiphospholipid syndrome and pregnancy-Diagnosis, complications and management: An overview.**

Tsikouras P, Tsiggalou C, Bothou A, Gerede A, Apostolou I, Gaitatzi F, Chalkidou A, Anthoulaki X, Michalopoulos S, Dragoutsos G, Tsirkas I, Babageorgaka I, Nalbanti T,

Sachnova N, Alexiou A, **Nikolettos K**, Tsalikidis C, Zervoudis S, Panagiotis Peitsidis P, Nikolettos N. In: Inflammation in the 21st century. Kumar V, Salgado AA, Athari SS (Eds).

IntechOpen, 2022. DOI: 10.5772/intechopen.99283.

Περίληψη

Antiphospholipid syndrome which is also known as APS is an autoimmune disease which represents an acquired form of thrombophilia. The etiology of APS remains unknown. This disorder occurs when the immune system mistakenly attacks some of the normal human proteins and manifests itself as recurrent arterial or venous thrombosis and it could emerge after abortions or in recurrent pregnancy loss. In APS, the body produces the wrong antibodies against phospholipid-binding proteins, that is present in the blood and plays an important role in coagulation. Antibodies are specific proteins that usually target and neutralize the body's invaders, such as viruses and bacteria. When antibodies attack phospholipid-binding proteins, blood clots abnormally. Specifically, it could cause blood clots in veins or arteries leading to stroke and various pregnancy complications such as: endometrial death, miscarriage, preeclampsia, intrauterine growth restriction and prematurity. APS is divided into primary and secondary, which is associated with autoimmune diseases and more often with systemic lupus erythematosus (SLE), while antibodies against cardiolipin are detected in many other conditions (infections, malignancies, drugs, etc.). The symptoms of APS, in addition to arterial and/or venous thrombosis and pregnancy complications, are multisystemic and the differential diagnosis of the primary APS from the secondary, in the context of SLE, is of particular clinical interest and is subject of this literature review.

- **Minimally invasive surgical treatment of pelvic pain in teenagers and young women.**
  Tsikouras P, Tsalikidis C, Anthoulaki X, Chalkidou A, Gerede A, Zervoudis S, Bothou A, Michalopoulos S, Dragoutsos G, Panagiotopoulos N, Gaitatzi F, Tsirkas I, Babgeorgaka I, Nalbanti T, Sachnova N, Alexiou A, **Nikolettos C**, Perente S, Peitsidis P, Nikolettos N. In: Advances in Minimally Invasive Surgery. Sanna A (Ed).

  IntechOpen, 2022. DOI: 10.5772/intechopen.97778.

  Περίληψη

  Pelvic pain could be acute or chronic but rarely could be life threatening with various reasons such as pathological, physiological or functional. Clinical evaluation and management should be performed simultaneously, especially in emergencies that carry a high risk of mortality. Clinical evaluation and management should be performed simultaneously, especially in emergencies that carry a high risk of mortality. Although a detailed history, physical and gynecological examination, supplemented with imaging modalities can itself be diagnostic, the role of laparoscopy for diagnosis should not be overlooked. The common causes of pelvic pain with focus on a minimally invasive approach in this age group are as following: endometriosis, rupture of ovarian cyst, infection, ovarian torsion, pelvic vein syndrome, adhesions pain due to previous surgery and unsatisfactory treated infections.

- **The contribution of uterine artery embolization as a safe treatment option for uterine fibroids.**

Tsikouras P, Bothou A, Anthoulaki X, Chalkidou A, Michalopoulos S, Nistikoulis G, Tsirkas I, Gaitatzi F, Gyroglou S, Babageorgaka I, Sachnova N, Koutsogiannis M, Lazarou A, Bouratzan AC, Theopi Nalbanti T, Peitsidis P, **Nikolettos K**, Dragoutsos G, Vogaitzaki T, Zervoudis S, Iatrakis G, Rath W, Nikolettos N, Souftas V. In: Fibroids. Abduljabbar H (Ed).

IntechOpen, 2021. DOI: 10.5772/intechopen.93999.

Περίληψη

Uterine fibroids have remarkably heterogeneous clinical characteristics with unknown exact aetiology. The treatment of fibroids should be individualized based on their size, location, growth rate, the symptoms that they cause, the desire to have children and the age of the woman. Embolization is currently the most advanced non-surgical technique. The majority of women report satisfactory post-treatment results like shorter hospitalization period and recovery time in comparison to hysterectomy and improvement or complete remission of clinical symptoms. Complications include amenorrhea (in the majority of cases: recurrence after three months) and infections that are generally treated with antibiotics. The results from most clinical studies and our published experience indicate that embolization improves pelvic symptoms related to uterine fibroids. Collaborative efforts between gynaecologists and interventional radiologists are necessary in order to optimize the safety and efficacy of this procedure. In the future, embolization could be generally recommended as treatment option for women who desire future fertility/pregnancy.

- **Twin pregnancies labour modus and timing**.

Tsikouras P, Chalkidou A, Bothou A, Gerede A, Anthoulaki X, Michalopoulos S, Tsirkas I, Gaitatzi F, Babageorgaka I, Lazarou A, Sachnova N, Koutsogiannis M, **Nikolettos K**, Nalbanti T, Demosthenous E, Dragoutsos G, Apostolou I, Alexiou A, Petsidis P, Zervoudis S, Iatrakis G, Rath W, Galazios G, Nikolettos N. In: Current topics in caesarean section. Tsikouras P, Nikolettos N, Rath W, Von Tempelhoff GF.

IntechOpen, 2021. DOI: 10.5772/intechopen.95982.

Περίληψη

Twin pregnancies are categorized according to three factors, zygosity, chorionicity and amnionicity. Dizygotic twins are always dichorionic and diamniotic, where each twin has its own chorionic and amniotic sac. Monozygotic twins account for 1/3 of twin pregnancies and show higher morbidity and mortality. In monozygotic twins, chorionicity and amnionicity are determined by the time of zygote division. Chorionicity and amnionicity determine the risks of twin pregnancy. Morbitidies are shown notable decreasing tendency depending on improving of high risk obstetric and neonatal care, however is still discussed the optimum labour management in twin pregnancies Vaginal delivery in twin pregnancies is possible when both have cephalic presentation and in the late weeks of pregnancy during which the risks of prematurity are minimized. The aim of this review was the assessment and evaluation the impact of the labour modus and timing of termination of twin pregnancies due to rise of their occurrence based on scientific aspects of the new published literature on perinatal outcome.

- **Premature birth, management, complications.**

  Tsikouras P, Bothou A, Gerede A, Apostolou I, Gaitatzi F, Deuteraiou D, Chalkidou A, Anthoulaki X, Michalopoulos S, Dragoutsos G, Tsirkas I, Babageorgaka I, Nalbanti T, Sachnova S, Alexiou A, **Nikolettos C**, Lazarou A, Zervoudis S, Peitsidis P, Nikolettos N. In: Global women's health. Wang Z (Ed).

  IntechOpen, 2021. DOI:10.5772/intechopen.98324.

  Περίληψη
  In recent years an increase in premature births (PB) rate has been noticed, as this pregnancy complication that still remain an important cause of perinatal morbidity and mortality, is multifactorial and prediction is not easy in many cases. There are many bibliographic data supporting the view that PB have also genetic predisposition. The trend of "recurrence" of PB in women as well as its increased frequency in ethnic groups suggests its association with genetic factors, either as such or as an interaction of genes and environment. Immunomodulatory molecules and receptors as well as polymorphisms of various genes and/or single nucleotides (single nucleotide polymorphisms, SNPs) now allow with advanced methods of Molecular Biology the identification of genes and proteins involved in the pathophysiology of PB. From the history of a pregnant woman, the main prognostic factor isa previous history of prematurity, while an ultrasound assessment of the cervix between 18 and 24 weeks is suggested, both in the developed and the developing world. According to the latest data, an effective method of successful prevention of premature birth has not been found. The main interventions suggested for thepr2evention of premature birth are the cervical cerclage, the use of cervical pessary, the use of progesterone orally, subcutaneously or transvaginally, and for treatment administration of tocolytic medication as an attempt to inhibit childbirth for at least 48 hours to make corticosteroids more effective. Despite the positive results in reducing mortality and morbidity of premature infants, the need for more research in the field of prevention, investigation of the genital code and the mechanism of initiation of preterm birth is important.

Μονογραφίες

- **Διερεύνηση της πιθανής συσχέτισης των επιπέδων της λεπτίνης, της αδιπονεκτίνης και της kisspeptin με τα ωοθηκικά αποθέματα των γυναικών αναπαραγωγικής ηλικίας.**

  Νικολέττος Κ, 2023. DOI: 10.12681/eadd/53548.
  Επιβλέπων: Καθηγητής Ασημακόπουλος Β, Βαθμολογία: Άριστα.

  Περίληψη
  Σκοπός: Σκοπός της παρούσας διδακτορικής διατριβής είναι η διερεύνηση της πιθανής συσχέτισης των επιπέδων της λεπτίνης, της αδιπονεκτίνης και της kisspeptin με τα ωοθηκικά αποθέματα γυναικών αναπαραγωγικής ηλικίας.Υλικό και μέθοδος: Για τη μελέτη συμφώνησαν να συμμετάσχουν 80 γυναίκες ηλικίας 19-40 ετών. Από αυτές τελικά συμπεριλήφθηκαν οι 74 καθώς στις 6 κρίθηκε ακατάλληλο το δείγμα του αίματος λόγω αιμόλυσης. Οι γυναίκες κατηγοριοποιήθηκαν σε τρεις κύριες ομάδες σε σχέση με τα πρότυπα των ωοθηκικών τους αποθεματικών: γυναίκες με επαρκείς ωοθηκικές εφεδρείες (Ομάδα A - AOR) (n=30), γυναίκες

με αυξημένες ωοθηκικές εφεδρείες (Ομάδα Β - PCOS) (n=31) και γυναίκες με μειωμένες ωοθηκικές εφεδρείες (Ομάδα Γ - DOR) (n=13).Αποτελέσματα: Η ομάδα με μειωμένες ωοθηκικές εφεδρείες είχε στατιστικά σημαντικά υψηλότερη ηλικία και τιμές FSH σε σχέση με τις δύο άλλες ομάδες. Δεν βρέθηκε στατιστικά σημαντική διαφορά μεταξύ των ομάδων για τις τιμές της Ε2, TSH. Η τιμή του ΔΜΣ, της LH, της ΤΤ, της 17-OHP, της DHEA, της ΑΜΗ και του AFC ήταν υψηλότερη στις γυναίκες με υψηλές ωοθηκικές εφεδρείες συγκριτικά με τις άλλες δύο ομάδες. Η ΑΜΗ και το AFC ήταν χαμηλότερο στις γυναίκες με χαμηλές ωοθηκικές εφεδρείες σε σύγκριση με τις άλλες ομάδες όπως αναμενόταν. Τα επίπεδα της λεπτίνης ήταν αυξημένα στις γυναίκες με PCOS όμως δεν υπήρχε στατιστικά σημαντική διαφορά σε σχέση με τις δύο άλλες ομάδες. Όσον αφορά στην αδιπονεκτίνη, η σύγκριση των τιμών της μεταξύ των τριών ομάδων έδειξε ότι οι γυναίκες με PCOS είχαν χαμηλότερες τιμές σε σύγκριση με τις άλλες ομάδες χωρίς όμως να είναι στατιστικά σημαντική η διαφορά. Τέλος η σύγκριση των επιπέδων της kisspeptin μεταξύ των τριών ομάδων έδειξε ότι τα επίπεδα της kisspeptin ήταν αυξημένα στις γυναίκες με χαμηλές ωοθηκικές εφεδρείες, συγκριτικά με τις άλλες δύο ομάδες, χωρίς όμως να υπάρχει στατιστικά σημαντική διαφορά. Καθώς δεν βρέθηκε σημαντικά στατιστική διαφορά μεταξύ των ομάδων για τις τιμές της λεπτίνης, της αδιπονεκτίνης και της kisspeptin έγινε στη συνέχεια περαιτέρω σύγκριση αυτών των τριών παραμέτρων ανά δύο ομάδες μεταξύ τους. Όταν πραγματοποιήθηκε σύγκριση των τριών αυτών παραμέτρων μεταξύ ομάδας Α (AOR) και ομάδας Γ (DOR) τότε βρέθηκε στατιστικά σημαντική διαφορά για την kisspeptin. Συμπεράσματα: Η κατηγοριοποίηση των γυναικών που πραγματοποιήσαμε με βάση τις ωοθηκικές εφεδρείες συμφωνεί απόλυτα με τη διεθνή βιβλιογραφία. Όσον αφορά τη λεπτίνη, την αδιπονεκτίνη και την kisspeptin, η σύνδεσή τους με την αναπαραγωγή είναι αδιαμφισβήτητη. Παρόλα αυτά και τα τρία πεπτίδια επηρεάζονται από πολλούς παράγοντες ταυτόχρονα και στη δική μας μελέτη, ο αριθμός των δειγμάτων ήταν περιορισμένος. Ο συγκεκριμένος τομέας χρήζει περαιτέρω διερεύνησης με μεγαλύτερο αριθμό δειγμάτων για να οδηγηθούμε σε ασφαλέστερα συμπεράσματα.

- **BRCA1, BRC2 και ωοθηκικές εφεδρείες. Νικολέττος Κ,** 2019. DOI: 10.26257/heal.duth.15247.
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  Περίληψη
  Η απουσία ενός γονιδίου που είναι υπεύθυνο για την επιδιόρθωση της βλάβης του DNA συχνά προκαλεί τη διακοπή του κυτταρικού κύκλου και την απόπτωση, η οποία με τη σειρά της ενεργοποιεί μια σειρά από ενέργειες που επηρεάζουν την ανάπτυξη. Το BRCA1 παίζει σημαντικό ρόλο στη διατήρηση της ακεραιότητας του γονιδιώματος. Ένα ειδικό χαρακτηριστικό του BRCA1 είναι ότι αλληλεπιδρά με πολλές διαφορετικές πρωτεΐνες που παίζουν σημαντικό ρόλο σε πολλαπλές βιολογικές οδούς. Ο ρόλος που διαδραματίζουν τα BRCA1 και BRCA2 στην αποκατάσταση των DSB φαίνεται να ποικίλλει. Ο κίνδυνος του καρκίνου των ωοθηκών που σχετίζονται με αυτά τα γονίδια, υπολογίστηκαν περίπου στο 40-53% για φορείς μετάλλαξης BRCA1 και 20-30% για φορείς BRCA2. Τα γονίδια BRCA1,2 βοηθούν στην πρόληψη όγκων του μαστού σε υγιή άτομα. Παίζουν σημαντικό ρόλο στην αποκατάσταση του DNA, στον έλεγχο του κυτταρικού κύκλου και στη διατήρηση της γονιδιωματικής σταθερότητας. Εάν το γονίδιο υφίσταται μετάλλαξη, τότε η παραγόμενη πρωτεΐνη δεν είναι σε θέση να ελέγξει την κυτταρική διαίρεση επιτρέποντας στα κύτταρα του μαστού να δώσουν καρκινικές μορφές. Η αναπαραγωγική γήρανση είναι μια συνεχής διαδικασία αρχόμενη πριν τη γέννηση και συνεχίζεται έως την εμμηνόπαυση. Οι γυναίκες έχουν περιορισμένο αριθμό γεννητικών κυττάρων, των οποίων ο αριθμός κορυφώνεται στα 6-

7 εκατομμύρια κατά την 20η εβδομάδα της κύησης. Από τη μέση της κύηση και κατά την διάρκεια της αναπαραγωγική ζωή, μια μη αναστρέψιμη διαδικασία μειώνει προοδευτικά τον αριθμό των ωοθηλακίων. Από όλες τις δοκιμασίες των ωοθηκικών αποθεμάτων που χρησιμοποιούνται σήμερα, οι δύο συχνότερα χρησιμοποιούμενες είναι οι AFC και AMH. Τα AFC μετρώνται με ενδοκολπική υπερηχογραφία στην πρώιμη ωοθυλακική φάση. Ο αριθμός των ωοθυλακίων και στις δύο ωοθήκες προστίθεται για το συνολικό AFC. Δεν υπάρχει επίσημη συμφωνία σχετικά με το μέγεθος των AFCs που πραγματικά αντιπροσωπεύει το αποθεματικό των ωοθηκών. Ένα τυπικό επίπεδο AMH για μια γόνιμη γυναίκα είναι 1,0-4,0 ng/ml. κάτω από 1,0 ng/ml θεωρείται χαμηλή και αποτελεί ενδεικτικό μειωμένου αποθεματικού των ωοθηκών. Η συσχέτιση μεταξύ των μεταλλάξεων BRCA και της γήρανσης των ωοθηκών άρχισε με παρατηρήσεις χαμηλότερης ανταπόκρισης στην διέγερση των ωοθηκών σε γυναίκες με καρκίνο του μαστού που υποβλήθηκαν σε διατήρηση της γονιμότητας με κρυοσυντήρηση εμβρύου και ωοκυττάρων. Η πλειοψηφία των συγγραφέων έδειξε ότι τα DSBs στο DNA τα οποία είναι σημαντικά για την φυσιολογική ανάπτυξη συσσωρεύονται με την ηλικία και συμβάλλουν στην αναπαραγωγική γήρανση σε ποντίκια και γυναίκες. Επιπλέον, η έκφραση του BRCA1 και άλλων βασικών γονιδίων στην οδό ATM μειώνεται με την ηλικία στα ανθρώπινα ωάρια. Αυτή η μείωση αντικατοπτρίζει την προηγούμενη αναφερθείσα μείωση της ηλικίας στο αποθεματικό ωοκυττάρων και την αναπαραγωγική λειτουργία που δείχνει σχέση μεταξύ της αποκατάστασης DNA DSB και της γήρανσης των ωοθηκών. Φυσικά, δεν έχουν βρει όλοι οι συγγραφείς άμεση σύνδεση μεταξύ των γονιδίων BRCA και γήρανσης των ωοθηκών. Σε μερικές άλλες έρευνες προσπάθησαν να ανακαλύψουν εάν υπάρχει σχέση μεταξύ της μετάλλαξης BRCA και της προγενέστερης εμμηνόπαυσης. Αλλά και πάλι δεν κατέληξαν στο ίδιο συμπέρασμα όλοι οι συγγραφείς. Ο λόγος για τον οποίο δεν μπορούμε να έχουμε ακόμη μια ξεκάθαρη απάντηση είναι ότι ο αριθμός των σχετικών ερευνών είναι επί του παρόντος περιορισμένος και δεν έχουν όλοι τα ίδια κριτήρια.