



Relatório de Dados da Disciplina

Sigla: RGO5861 - 1 Tipo: POS

Nome: Tópicos em Biologia do Câncer de Mama e Ginecológico

Área: Ginecologia e Obstetrícia (17145)

Datas de aprovação:

CCP: 16/11/2016 CPG: 22/11/2016 CoPGr:

Data de ativação: 06/12/2016 Data de desativação:

Carga horária:

Total: 60 h Teórica: 0 h Prática: 2 h Estudo: 1 h

Créditos: 4 Duração: 20 Semanas

87710 - Helio Humberto Angotti Carrara - 16/11/2016 até data atual
Responsáveis: 370014 - Daniel Guimarães Tiezzi - 16/11/2016 até data atual
943106 - Francisco José Cândido dos Reis - 16/11/2016 até data atual

Objetivos:

O principal objetivo deste curso é propiciar ao aluno de pós-graduação em nível de Mestrado ou em nível de Doutorado na Universidade de São Paulo o conhecimento da biologia do câncer, de forma abrangente desde a biologia básica até os aspectos translacionais. O aprendizado envolverá seminários semanais e atividades on-line através do Moodle Stoa-USP com aulas gravadas, discussão de artigos e questionários.

Justificativa:

O conhecimento dos conceitos de biologia do câncer é essencial para que o aluno possa desenvolver pesquisas em temas oncológicos. Independentemente do tipo do estudo, o pesquisador necessita conhecer a epidemiologia, a carcinogênese, o tipo de resposta do tumor aos tratamentos empregados, o que facilitará o entendimento do tratamento multimodal dos tumores, como cirurgia, quimioterapia, hormônioterapia e a terapia imunológica.

Conteúdo:

1. História natural dos tumores, estrutura e nomenclatura.
2. Conceitos em Epidemiologia do Câncer
3. Susceptibilidade herdada em oncologia
4. Pesquisa em biologia computacional no câncer
5. Mecanismos de metastatização
6. Oncogenes e supressores tumorais (sinalização e pathways)
7. Transcrição
8. Modelos in vivo
9. Terapia e estudos (trials) clínicos
10. Imagens em pesquisas e tratamentos oncológicos
11. Radioterapia no tratamento do cancer
12. Genoma do câncer de mama: da biologia à aplicação clínica
13. O receptor estrogênico e seu papel na transcrição e no câncer de mama
14. Introdução à quimioterapia: curvas de Kaplan-Meier e seu papel na pesquisa clínica em câncer
15. Resistência terapêutica do câncer do ovário
16. Novas abordagens no tratamento clínico do cancer de colo do útero
17. Tratamento cirúrgico do câncer de mama: aspectos atuais
18. Tratamento cirúrgico do câncer do endométrio: aspectos atuais
19. Tratamento cirúrgico do câncer do ovário: aspectos atuais
20. Tratamento cirúrgico do câncer do colo do útero: aspectos atuais



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Bibliografia:

- "The Biology of Cancer", by Robert A. Weinberg, June 2006, (Garland Science Textbooks), 864pp.
- Comprehensive Molecular Portraits of Invasive Lobular Breast Cancer. Ciriello G, Gatza ML, Beck AH, Wilkerson MD, Rhie SK, Pastore A, Zhang H, McLellan M, Yau C, Kandoth C, Bowlby R, Shen H, Hayat S, Fieldhouse R, Lester SC, Tse GM, Factor RE, Collins LC, Allison KH, Chen YY, Jensen K, Johnson NB, Oesterreich S, Mills GB, Cherniack AD, Robertson G, Benz C, Sander C, Laird PW, Hoadley KA, King TA; TCGA Research Network, Perou CM. Cell. 2015 Oct 8;163(2):506-19. doi: 10.1016/j.cell.2015.09.033.
- The genomic and transcriptomic architecture of 2,000 breast tumours reveals novel subgroups. Curtis C, Shah SP, Chin SF, Turashvili G, Rueda OM, Dunning MJ, Speed D, Lynch AG, Samarajiwa S, Yuan Y, Gräf S, Ha G, Haffari G, Bashashati A, Russell R, McKinney S; METABRIC Group, Langerød A, Green A, Provenzano E, Wishart G, Pinder S, Watson P, Markowitz F, Murphy L, Ellis I, Purushotham A, Børresen-Dale AL, Brenton JD, Tavaré S, Caldas C, Aparicio S. Nature. 2012 Apr 18;486(7403):346-52. doi: 10.1038/nature10983.
- Comprehensive molecular portraits of human breast tumours. Cancer Genome Atlas Network. Nature. 2012 Oct 4;490(7418):61-70. doi: 10.1038/nature11412. Epub 2012 Sep 23.
- Cell and Molecular Biology: Concepts and Experiments [Hardcover] - Gerald Karp, 2009.
- The Biology of Cancer [Hardcover] - Robert A. Weinberg, 2006.
- Molecular Oncology of Breast Cancer [Hardcover] - Jeffrey S. Ross and Gabriel N. Hortobagyi, 2004.
- Rosen's Breast Pathology [Hardcover] - Paul Peter Rosen, 2008.
- The Breast: Comprehensive Management of Benign and Malignant Diseases [Hardcover] - Kirby I. Bland and Edward M. Copeland III, 2009.
- Kuerer's Breast Surgical Oncology [Hardcover] – Henry Mark Kuerer, , Ed. McGraw-Hill, 2010.
- Compêndio de Mastologia – Abordagem Multidisciplinar. Ricardo A. Boff, Alexandre C. de Carli, Henrique Brenelli, Fabrício P. Brenelli, Lourenço Z. Sauer, André B. Reiriz, Celso P. Coelho, Guilherme P. Coelho. 1a Edição, Editora Loligraf, Caxias do Sul, RS, 2015.
- Axillary Dissection vs No Axillary Dissection in Women With Invasive Breast Cancer and Sentinel Node Metastasis A Randomized Clinical Trial. Armando E. Giuliano, Kelly K. Hunt, Karla V. Ballman, Peter D. Beitsch, Pat W. Whitworth, Peter W. Blumencranz, A. Marilyn Leitch, Sukamal Saha, Linda M. McCall, Monica Morrow. JAMA. 2011;305(6):569-575.
- Axillary Lymph Node Dissection for Sentinel Lymph Node Micrometastases May Be Safely Omitted in Early-Stage Breast Cancer Patients: Long-Term Outcomes of a Prospective Study. Igor Langer, Ulrich Guller, Carsten T. Viehl, Holger Moch, Edward Wight, Felix Harder, Daniel Oertli and Markus Zuber. Ann Surg Oncol (2009) 16:3366–3374.
- Completion Axillary Lymph Node Dissection Not Required for Regional Control in Patients With Breast Cancer Who Have Micrometastases in a Sentinel Node. Sara Yegiyants, Lina M. Romero, Philip I. Haigh, L. Andrew DiFronzo. Arch Surg. 2010;145(6):564-569.
- Completion Axillary Lymph Node Dissection Not Required for Regional Control in Patients With Breast Cancer Who Have Micrometastases in a Sentinel Node. Sara Yegiyants, Lina M. Romero, Philip I. Haigh, L. Andrew DiFronzo. Arch Surg. 2010;145(6):564-569.
- Is axillary lymph node clearance required in node-positive breast cancer?
- Nigel J. Bundred, Nicola L. P. Barnes, Emiel Rutgers and Mila Donker.
- Nat. Rev. Clin. Oncol. 12, 55–61 (2015).

Forma de avaliação:

VIDE OBSERVAÇÕES

Observação:

Critérios de avaliação:

A avaliação da disciplina será baseada na execução das atividades resolução dos problemas propostos para cada uma das quatro semanas do curso. O prazo ideal é o último dia de cada semana letiva. O prazo máximo é o último dia da última semana do curso.

Conceito A: resolução das atividades das quatro semanas dentro dos prazos ideais.

Conceito B: resolução das atividades das quatro semanas dentro do prazo máximo, com três semanas dentro dos prazos ideais.

Conceito C: resolução das atividades das quatro semanas dentro do prazo máximo.

Conceito R: não resolução de qualquer das quatro atividades até o prazo máximo.



Discipline Information

The following dates are in (dd/mm/yyyy) format.

Code: RGO5861 - 1 Type: POS
Name: Lectures in Biology of Breast and Gynecological Cancer
Concentration area: Ginecologia e Obstetrícia (17145)

Approval dates:

CCP: 16/11/2016 CPG: 22/11/2016 CoPGr:

Activation date: 06/12/2016 Inactivation date:

Workload:

Total: 60 h Theory: 0 h Practice: 2 h Study: 1 h

Credits: 4 Duration: 20 weeks

87710 - Helio Humberto Angotti Carrara - 16/11/2016 until today
Professors: 370014 - Daniel Guimarães Tiezzi - 16/11/2016 until today
943106 - Francisco José Cândido dos Reis - 16/11/2016 until today

Objectives:

The main aim of this course is to provide students of Masters or PhD programmes at University of Sao Paulo with a strong background in cancer biology, ranging from basic biology through to translational aspects. Teaching involves seminars once a week, and online activities (Moodle Stoa – USP): video-lectures, articles and quizzes.

Rationale:

The knowledge of concepts of cancer biology is essential for students developing research in cancer field. Independently of type of study, the researcher needs knowledge about cancer epidemiology, carcinogenesis, tumor response to treatment, bases for multimodal treatment(surgery, chemotherapy, hormonal therapy, immunological therapy).

Content:

1. Tumor natural history, structure and nomenclature 2. Concepts in Cancer Epidemiology 3. Inherited susceptibility to cancer 4. Computational biology in cancer research 5. Mechanisms of metastasis 6. Oncogenes and tumor suppressors (signaling and pathways) 7. Transcription 8. In vivo models 9. Therapeutics and clinical trials 10. Image in cancer research and cancer treatment 11. Radiotherapy in the management of cancer 12. Functional breast cancer genomics: from basic biology to clinical application 13. Estrogen receptor and its role in transcription and breast cancer 14. Introduction to chemotherapy: role of Kaplan Meier curves in clinical cancer research 15. Clinical drug resistance in ovarian cancer 16. New approaches to the clinical management of cervical cancer 17. Surgical management of Breast Cancer: aspectos atuais 18. Surgical management of endometrial cancer: current knowledge 19. Surgical management of ovarian cancer: current knowledge 20. Surgical management of cervical cancer: current knowledge

Bibliography:

• "The Biology of Cancer", by Robert A. Weinberg, June 2006, (Garland Science Textbooks), 864pp. • Comprehensive Molecular Portraits of Invasive Lobular Breast Cancer. Ciriello G, Gatz ML, Beck AH, Wilkerson MD, Rhie SK, Pastore A, Zhang H, McLellan M, Yau C, Kandoth C, Bowlby R, Shen H, Hayat S, Fieldhouse R, Lester SC, Tse GM, Factor RE, Collins LC, Allison KH, Chen YY, Jensen K, Johnson NB, Oesterreich S, Mills GB, Cherniack AD, Robertson G, Benz C, Sander C, Laird PW, Hoadley KA, King TA; TCGA Research Network, Perou CM. Cell. 2015 Oct 8;163(2):506-19. doi: 10.1016/j.cell.2015.09.033. • The genomic and transcriptomic architecture of 2,000 breast tumours reveals novel subgroups. Curtis C, Shah SP, Chin SF, Turashvili G, Rueda OM, Dunning MJ, Speed D, Lynch AG, Samarajiwa S, Yuan Y, Gräf S, Ha G, Haffari G, Bashashati A, Russell R, McKinney S; METABRIC Group, Langerød A, Green A, Provenzano E, Wishart G, Pinder S, Watson P, Markowitz F, Murphy L, Ellis I, Purushotham A, Børresen-Dale AL, Brenton JD, Tavaré



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S, Caldas C, Aparicio S. Nature. 2012 Apr 18;486(7403):346-52. doi: 10.1038/nature10983. • Comprehensive molecular portraits of human breast tumours. Cancer Genome Atlas Network. Nature. 2012 Oct 4;490(7418):61-70. doi: 10.1038/nature11412. Epub 2012 Sep 23. • Cell and Molecular Biology: Concepts and Experiments [Hardcover] - Gerald Karp, 2009. The Biology of Cancer [Hardcover] - Robert A. Weinberg, 2006. • Molecular Oncology of Breast Cancer [Hardcover] - Jeffrey S. Ross and Gabriel N. Hortobagyi, 2004. • Rosen's Breast Pathology [Hardcover] - Paul Peter Rosen, 2008. • The Breast: Comprehensive Management of Benign and Malignant Diseases [Hardcover] - Kirby I. Bland and Edward M. Copeland III, 2009. • Kuerer's Breast Surgical Oncology [Hardcover] – Henry Mark Kuerer, , Ed. McGraw-Hill, 2010. • Compêndio de Mastologia – Abordagem Multidisciplinar. Ricardo A. Boff, Alexandre C. de Carli, Henrique Brenelli, Fabrício P. Brenelli, Lourenço Z. Sauer, André B. Reiriz, Celso P. Coelho, Guilherme P. Coelho. 1a Edição, Editora Loligraf, Caxias do Sul, RS, 2015. • Axillary Dissection vs No Axillary Dissection in Women With Invasive Breast Cancer and Sentinel Node Metastasis A Randomized Clinical Trial. Armando E. Giuliano, Kelly K. Hunt, Karla V. Ballman, Peter D. Beitsch, Pat W. Whitworth, Peter W. Blumencranz, A. Marilyn Leitch, Sukamal Saha, Linda M. McCall, Monica Morrow. JAMA. 2011;305(6):569-575. • Axillary Lymph Node Dissection for Sentinel Lymph Node Micrometastases May Be Safely Omitted in Early-Stage Breast Cancer Patients: Long-Term Outcomes of a Prospective Study. Igor Langer, Ulrich Guller, Carsten T. Viehl, Holger Moch, Edward Wight, Felix Harder, Daniel Oertli and Markus Zuber. Ann Surg Oncol (2009) 16:3366–3374. • Completion Axillary Lymph Node Dissection Not Required for Regional Control in Patients With Breast Cancer Who Have Micrometastases in a Sentinel Node. Sara Yegiyants, Lina M. Romero, Philip I. Haigh, L. Andrew DiFronzo. Arch Surg. 2010;145(6):564-569. • Completion Axillary Lymph Node Dissection Not Required for Regional Control in Patients With Breast Cancer Who Have Micrometastases in a Sentinel Node. Sara Yegiyants, Lina M. Romero, Philip I. Haigh, L. Andrew DiFronzo. Arch Surg. 2010;145(6):564-569. • Is axillary lymph node clearance required in node-positive breast cancer? • Nigel J. Bundred, Nicola L. P. Barnes, Emiel Rutgers and Mila Donker. • Nat. Rev. Clin. Oncol. 12, 55–61 (2015).

Type of Assessment:

SEE OBSERVATIONS

Note:

Assessment Criteria: The assessment is based on the submission of quiz answers weekly. Each quiz is due by the end of the respective week and all answers have to be posted by the end of the course. Grade A: all quiz answers posted on time. Grade B: all quiz answers posted by the end of the course, but one activity delayed in relation to the week deadline. Grade C: all quiz answers posted by the end of the course, but more than one activity delayed in relation to the week deadline. Grade D: if any activity is not completed by the end of the course.