

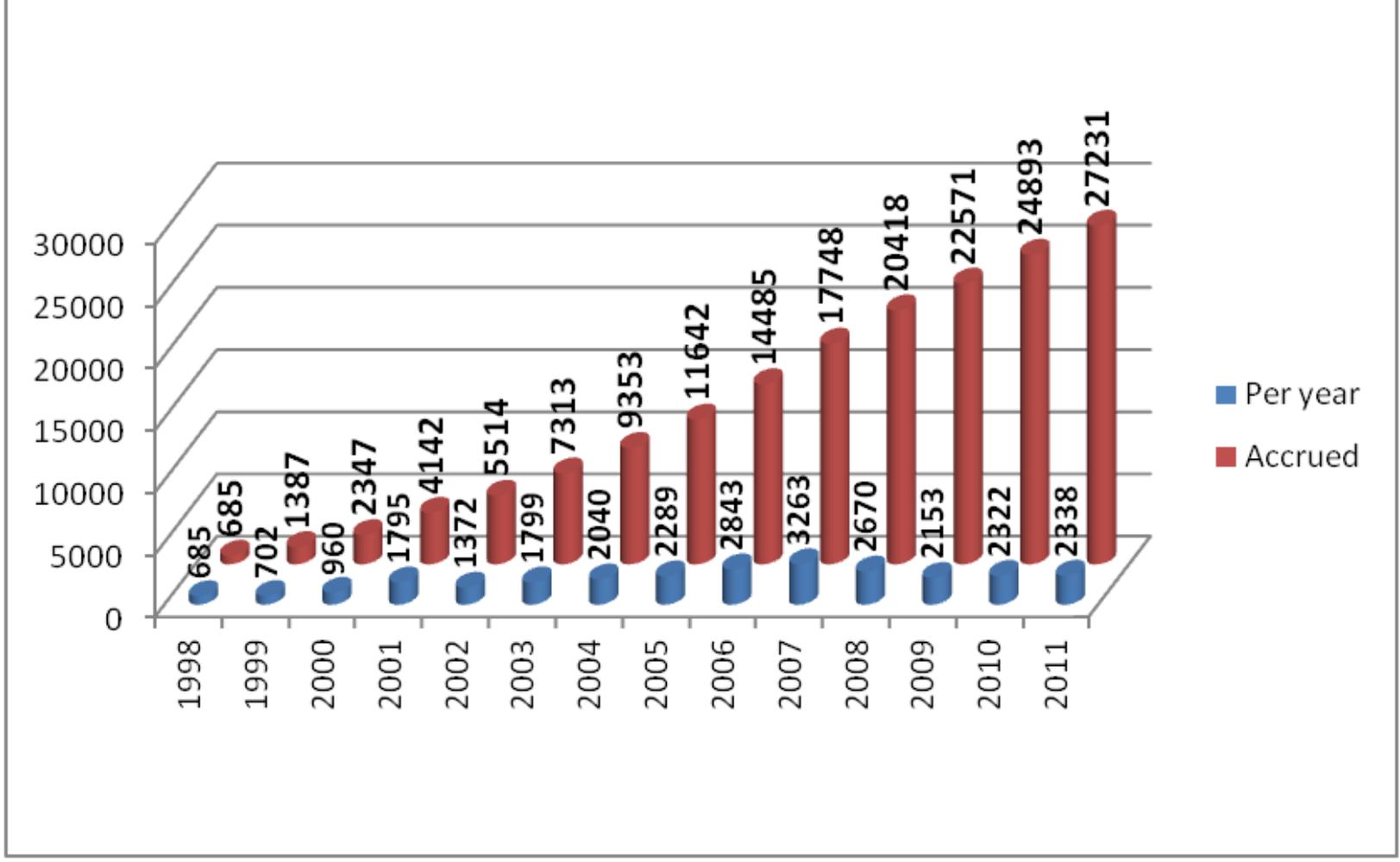


RICARDO BRENTANI PRESIDENT



FAPESP WEEK OCTOBER 22, 2011

- ✓ 400.000 outpatient visits/year
- ✓ 16.000 new cancer cases/year
- ✓ 320 beds / 24 ICU beds
- ✓ 11.000 Surgeries/year
- ✓ 300.000 Hospital records (87-95% 5-year follow up)
- ✓ 1.500.000 Paraffin blocks
- ✓ 38,145 Paraffin blocks from 2543 autopsies
- ✓ 86% 5-years follow-up



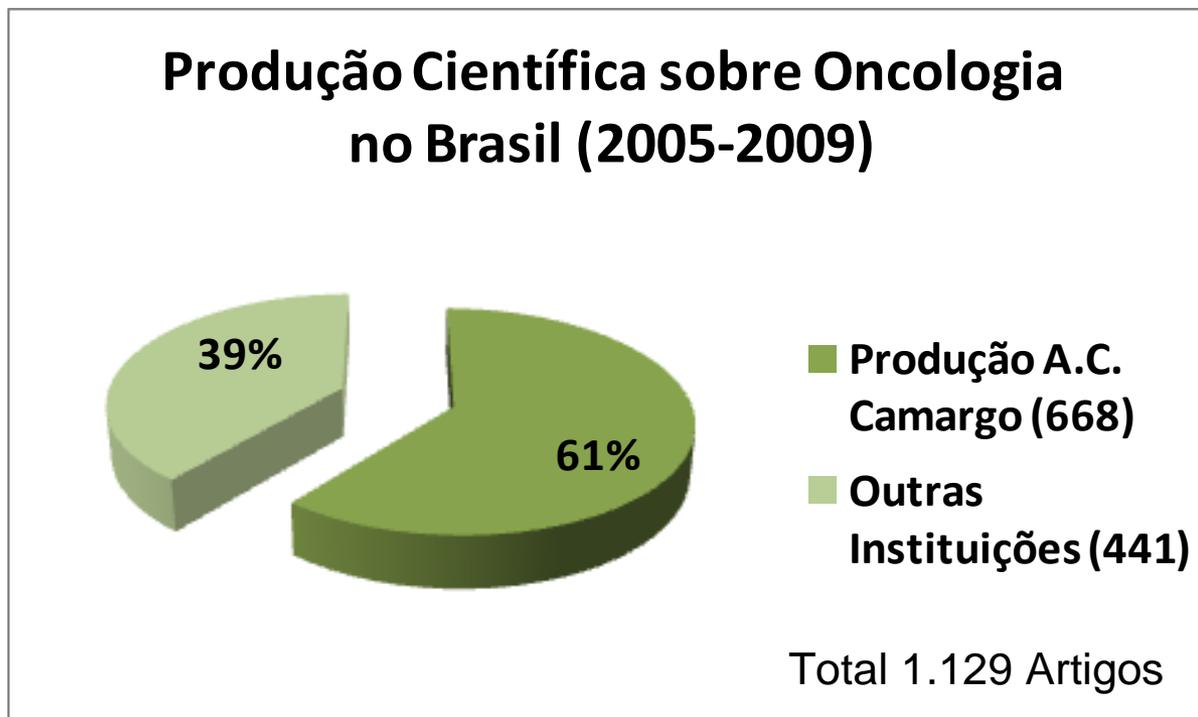
Ranking da Produção Científica do Brasil nas 48 subáreas da medicina no quinquênio 2005-2009. (1º a 16º)

Rank	Área do conhecimento	Nº Artigos	Citação	Impacto	% Artigos no Mundo
1	Pharmacology & Pharmacy	4.203	17.048	4,06	2,86
2	Dentistry Oral Surg & Med	3.403	9888	2,91	10,41
3	Public Env & Occ Hlth	3.365	6680	1,99	4,07
4	Surgery	2.650	7113	2,68	1,99
5	Immunology	2.328	13.184	5,66	2,40
6	Tropical Med	2.147	4829	2,25	20,84
7	Endocrinology & Metabolism	1.828	8.029	4,39	2,67
8	Med Res & Experimental	1.572	5.568	3,54	2,88
9	Clinical Neurology	1.550	6.962	4,49	1,53
10	Infectious Diseases	1.456	8.483	5,83	3,30
11	Cardiac & Cardiovascular Sys	1.411	6.289	4,46	1,92
12	Physiology	1.163	4.037	3,47	2,30
13	Oncology	1.129	11.765	10,42	0,89
14	Nutrition & Dietetics	1.127	3.487	3,09	3,16
15	Pediatrics	1.099	2.737	2,49	1,81
16	Med General & Internal	1.061	1910	1,80	1,42

PRODUÇÃO CIENTÍFICA

Entre as 48 principais especialidades médicas, Oncologia é a de maior impacto em produção científica no Brasil (quinquênio 2005 – 2009).

Fonte: ISI – Institute for Scientific Information, CD-Rom: National Science Indicators –Base de Luxe – SCI 2009, USA



141 Artigos publicados em Revistas Internacionais até outubro de 2010.

Research and Innovation Center for Cancer Research



Hospital
A.C. Camargo

CENTRO DE EXCELÊNCIA EM
PESQUISA INOVAÇÃO E DIFUSÃO

FAPESP

CEPID

Home | Quem Somos | Pesquisadores | Infra-Estrutura | Projetos de Pesquisa | Difusão | Publicações | Contatos

Destaque:
Saiba mais sobre o teste de polimorfismo do gene PTC que avalia a sensibilidade ao sabor amargo

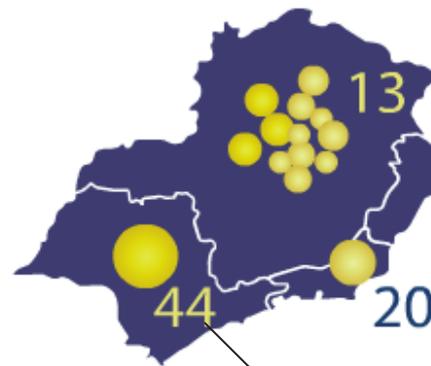
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ky/WM2



Institutos - Sudeste

77 Institutos



Região Sudeste - SP

SP

RJ

MG

SP - Instituto Nacional de C&T em Metrologia das Radiações na Medicina

SP - Instituto Nacional de C&T para Mudanças Climáticas

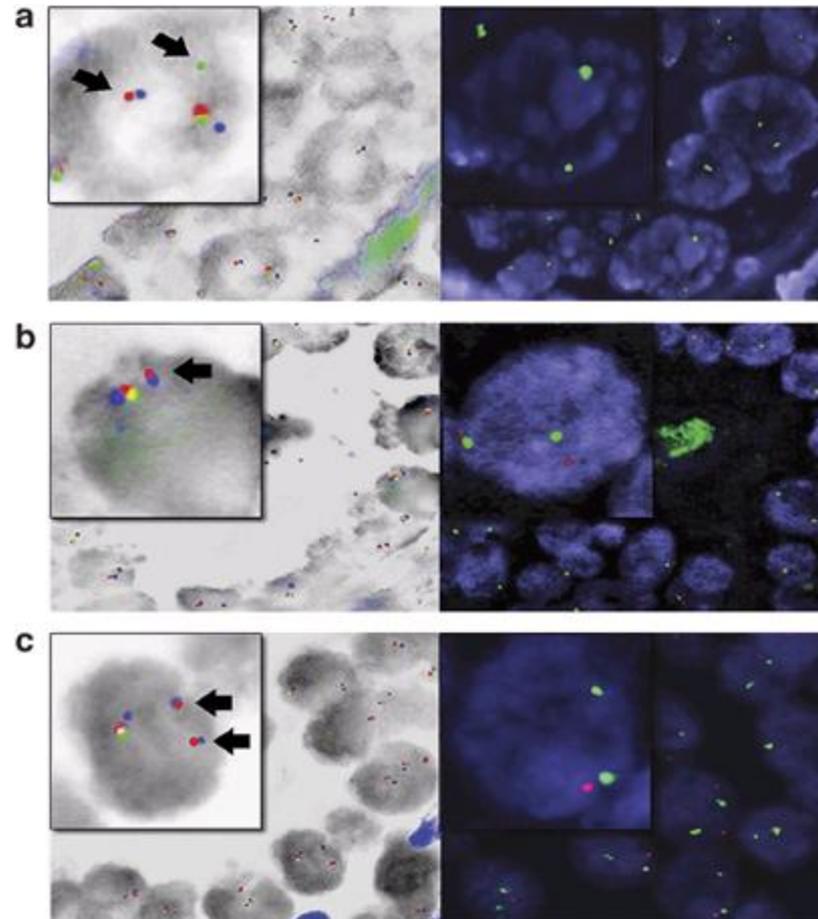
SP - Instituto Nacional de C&T de Neurociência Translacional

SP - Instituto Nacional de C&T de Obesidade e Diabetes

SP - Instituto Nacional de C&T em Oncogenômica

SP - Instituto Nacional de C&T em Óptica e Fotônica

SP - Instituto Nacional de C&T de Políticas do Álcool e Drogas



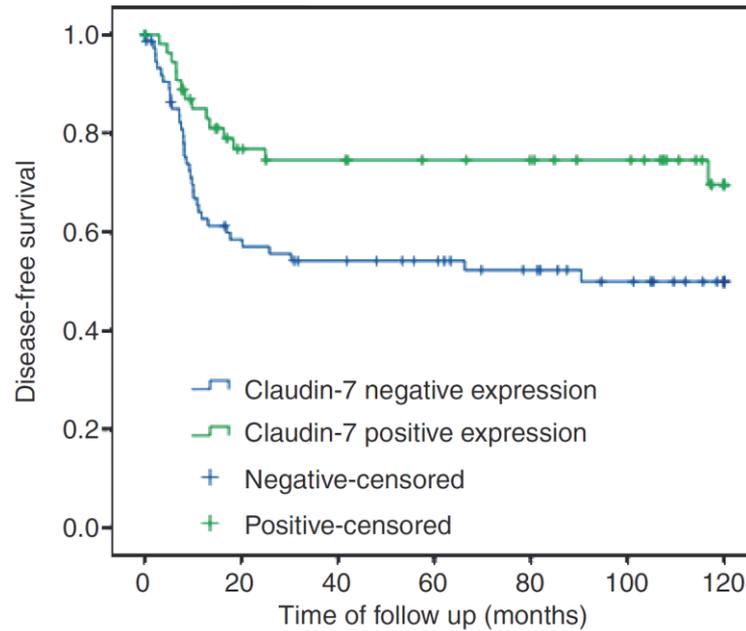


Figure 2. Survival curve of oral squamous cell carcinoma patients with either positive claudin-7 expression or negative expression. The disease-free 10-year survival rate for patients with positive (green line) claudin-7 expression and negative (blue line) expression was 69.9% and 49.9%, respectively.

Silvia Vanessa Lourenço, et.al, Histopathology 2010

Table 1. HCGP and CGAP transcript sequence generation and clustering

ORESTES submitted to GenBank _____	823,121 sequences
CGAP EST submitted to GenBank _____	1,214,358 sequences
TOTAL EST submitted to GenBank _____	2,037,479 sequences
Total clusters _____	32,129 clusters
Total clusters with known genes _____	22,152 clusters
Clusters without known genes _____	9,977 clusters
Clusters without known genes but with coding potential _____	1,285 clusters
Estimated total genes based on HCGP and CGAP data _____	23,437 genes

Array Production:

 With Bioinformatics, we can design “project-oriented” arrays,
Exploitation of ORESTES clone collection.

4.8K:

Only full length genes

Filtered for repetitive sequences

Single hit with human genome

Less than 85% homology with any other stretch of 100bp within the human genome

3' end most, but 5' from the first polyA signal

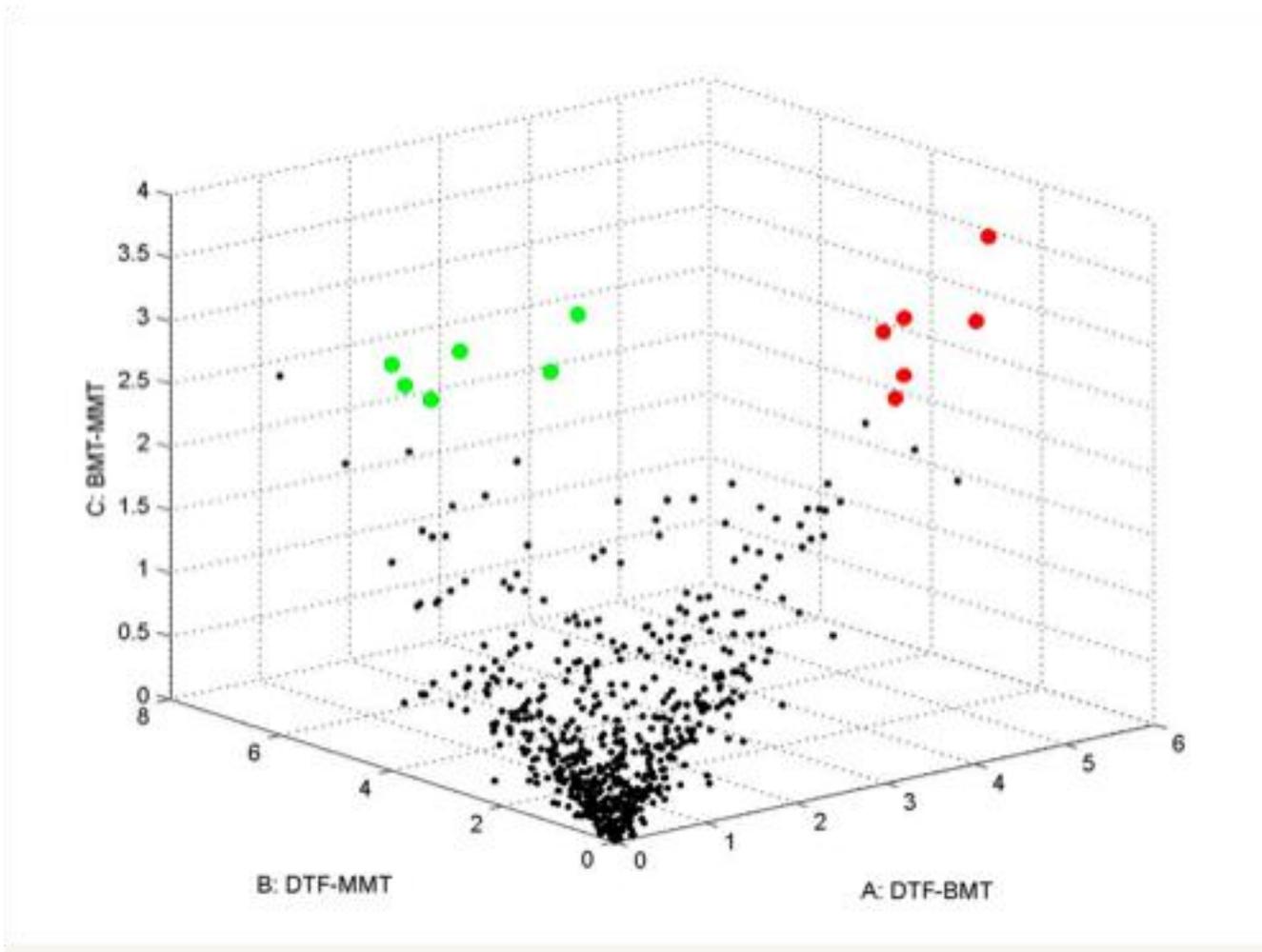
Not less than 300bp

Sequence verified

Link to external databases (NCBI, SOURCE, GO, etc)

Some clinically relevant
questions
we are currently pursuing:

- Can we improve diagnosis?



Isabella Werneck Cunha, et al; *Translational Oncology* (2010) 3, 23-32

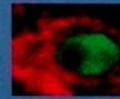
- Can we improve prognosis?

**The use of
Fisher's Discriminant Analysis
to define predictive trios of genes for
gastric cancer**

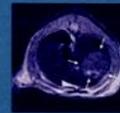
About the Cover

The cover shows a molecular classifier for gastric cancer based on the expression levels of three genes in normal gastric mucosa (green frame) gastritis (blue frame), intestinal metaplasia (brown frame) and gastric adenocarcinoma (red frame). The authors describe the construction of molecular classifiers based on trios of genes that can discriminate between malignant and non-malignant samples. Importantly, some samples of intestinal metaplasia, known to be at higher risk of becoming malignant, showed signatures that resemble that of a tumor sample. For details, see the article by [Meireles et al.](#) on page 1255 of this issue.

February 15, 2004
Volume 64
Number 4
Pages 1209-1560



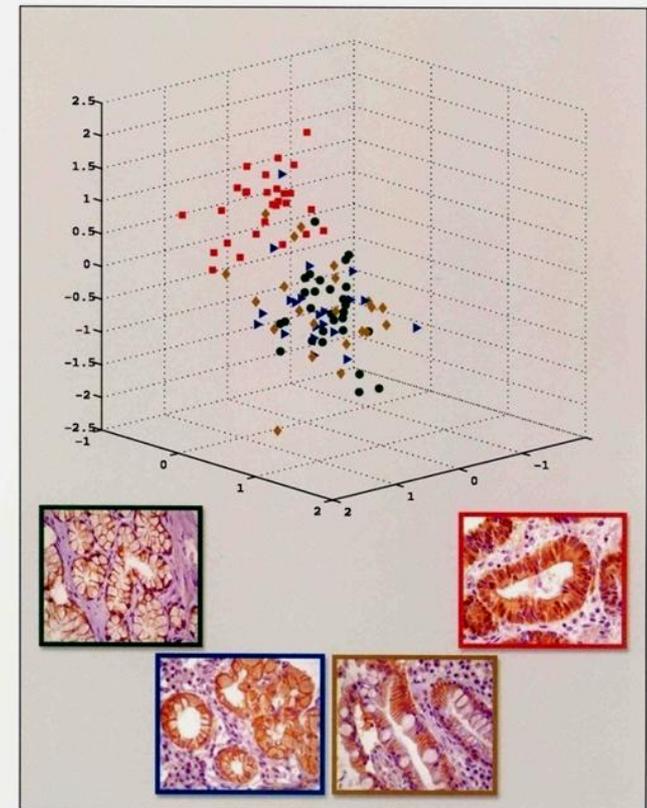
AdiNOS Plus RT
Induce Apoptosis in
Tumor Cells *in Vivo*



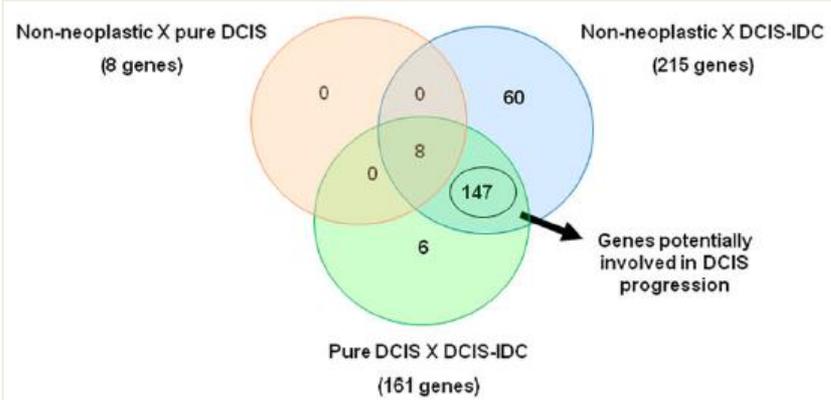
HCC Characterization
by T2-Weighted MRI

Molecular
Classifiers for
Gastric Cancer

Cancer Research



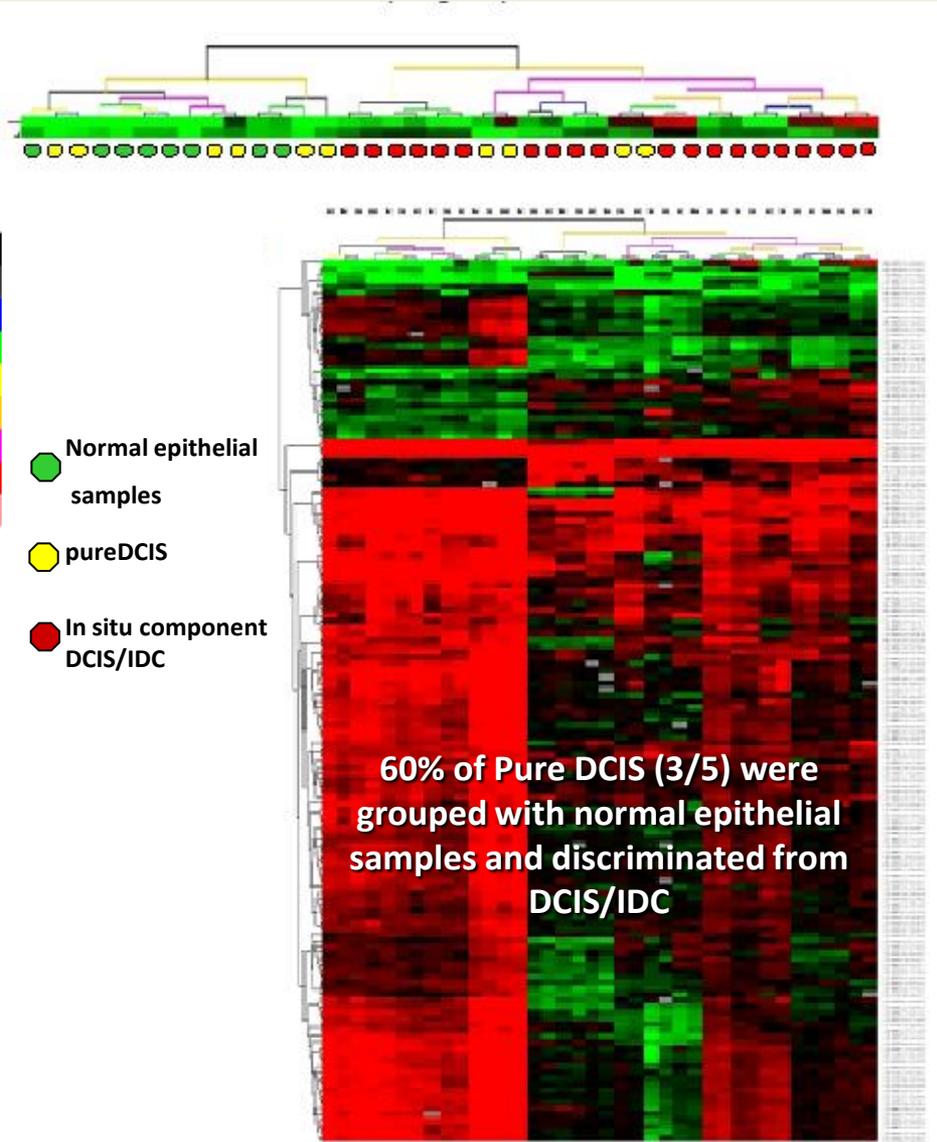
Gene expression signature for DCIS progression



147 differentially expressed genes (DEG)

Statistical significant enrichment:

- cell adhesion (represented by *C20orf42*, *LPXN*, *LKC*, *DGCR2*, *AZGP1*, *CHST10*, *ITGB2*, *PLEKHC1*, *PCDH10* and *NEDD9*)
- cellular defense (represented by *CXCL9*, *MAPRE2* and *C3AR1*)

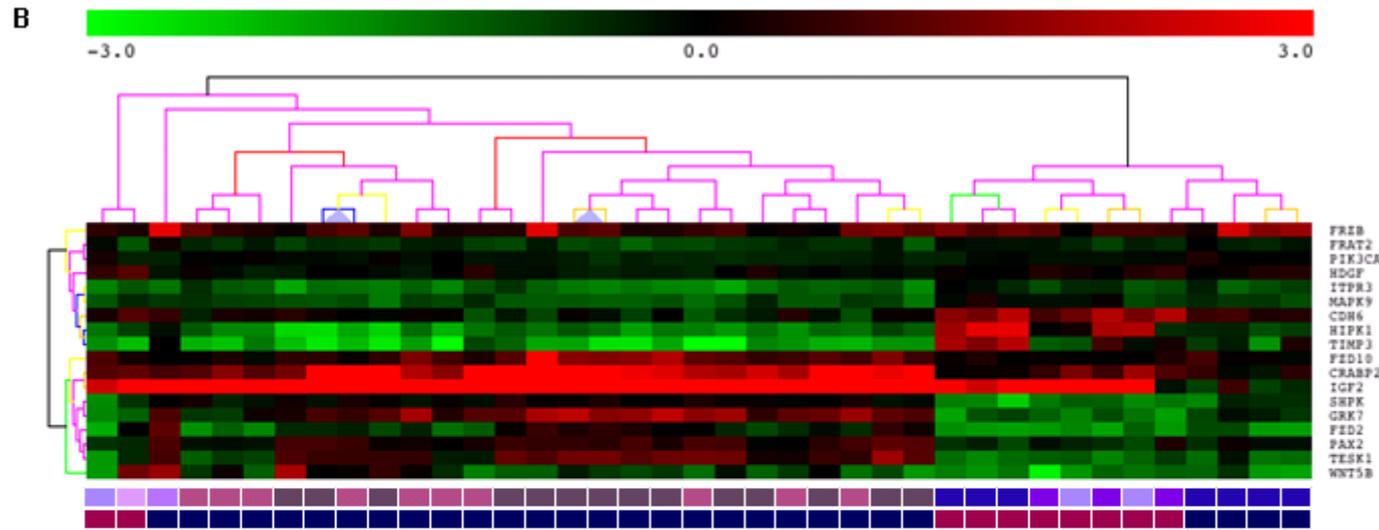


- Can we investigate etiology?

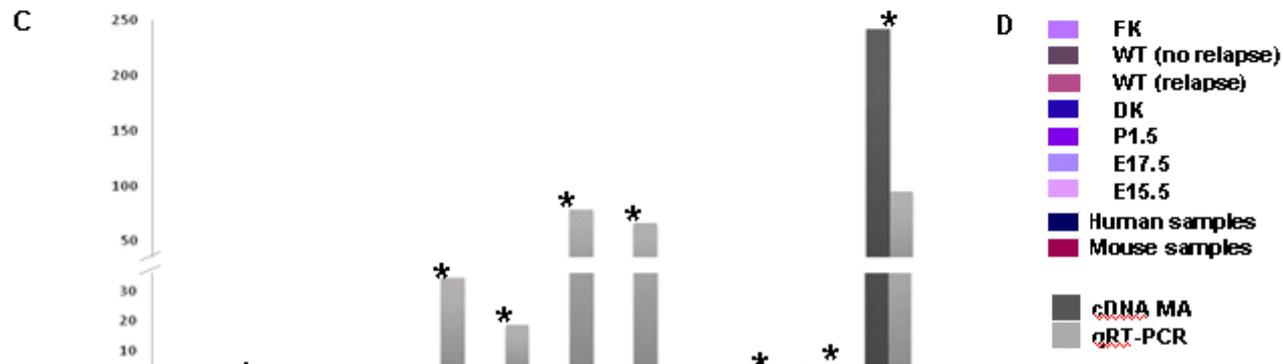
Unsupervised hierarchical clustering based on the expression patterns of the 18 genes recapitulated in WT

Samples from differentiated and intermediate kidneys from humans and mice were grouped together and discriminated from the WT samples.

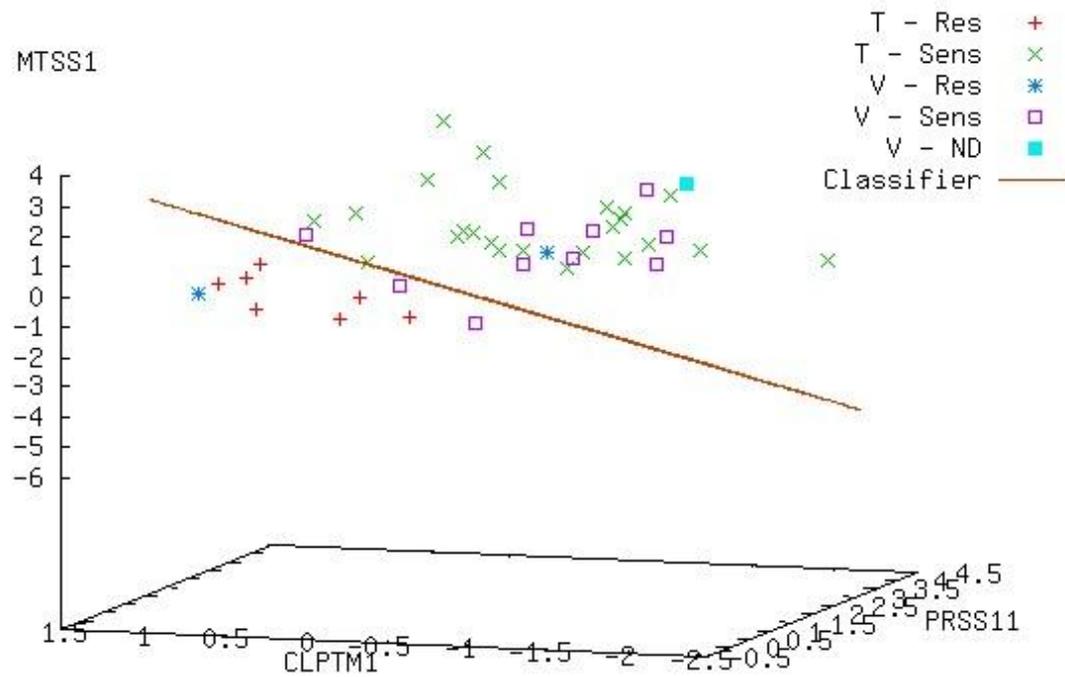
WT samples were grouped with the pool of human fetal kidneys and the earliest mouse embryonic kidneys



- Model for interspecific hybridization proved to be appropriate for studying human tumorigenesis and mouse embryogenesis
- Gene expression signature linked with Wnt and related signaling pathways was associated with WT onset.



- Can we predict response to therapy?

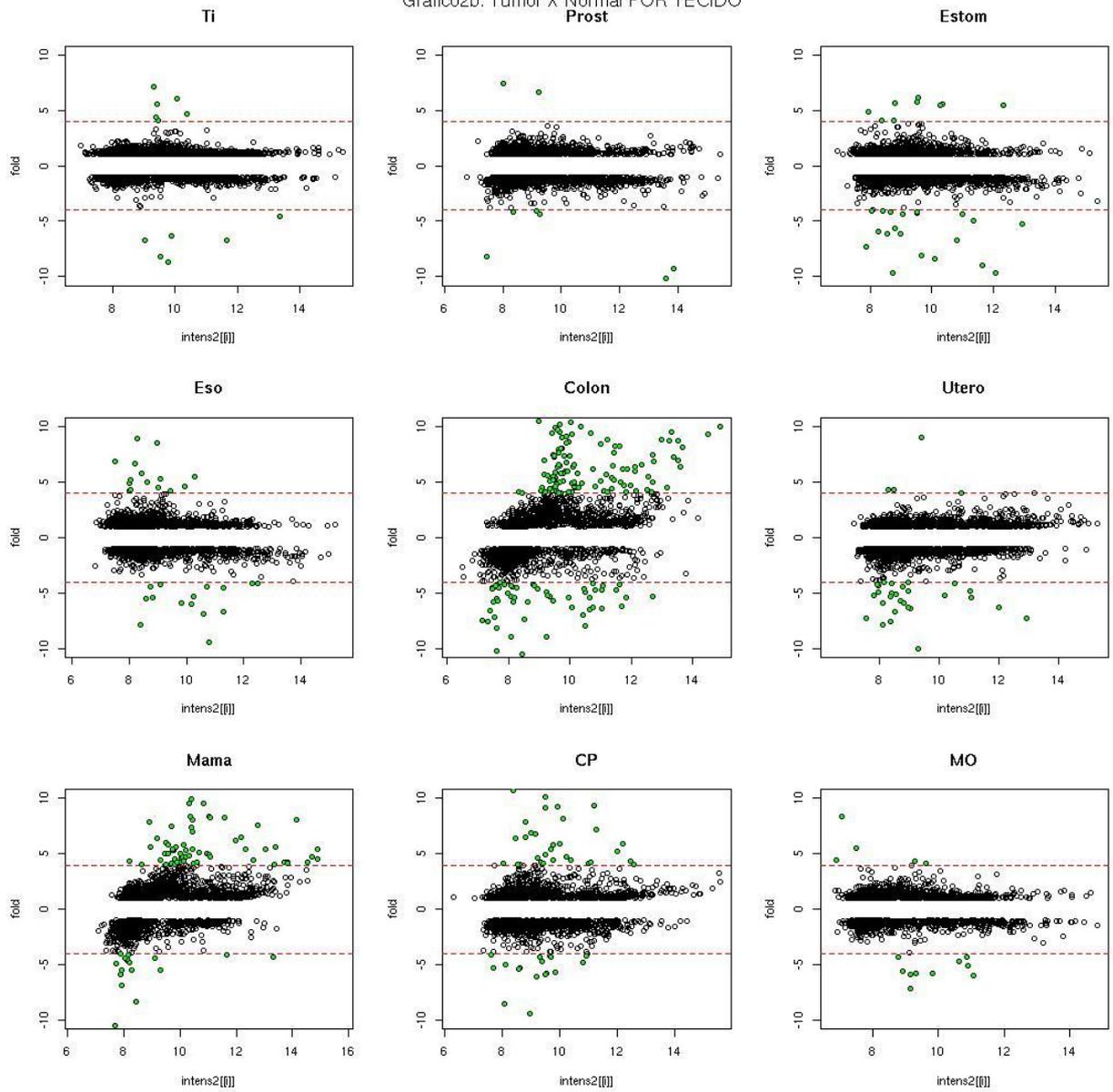


Folgueira et al, Clin Cancer Res. 2005 Oct 15;11(20):7434-7443

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Grafico2b: Tumor X Normal POR TECIDO



Amostras sem alteração cromossômica (CGH)

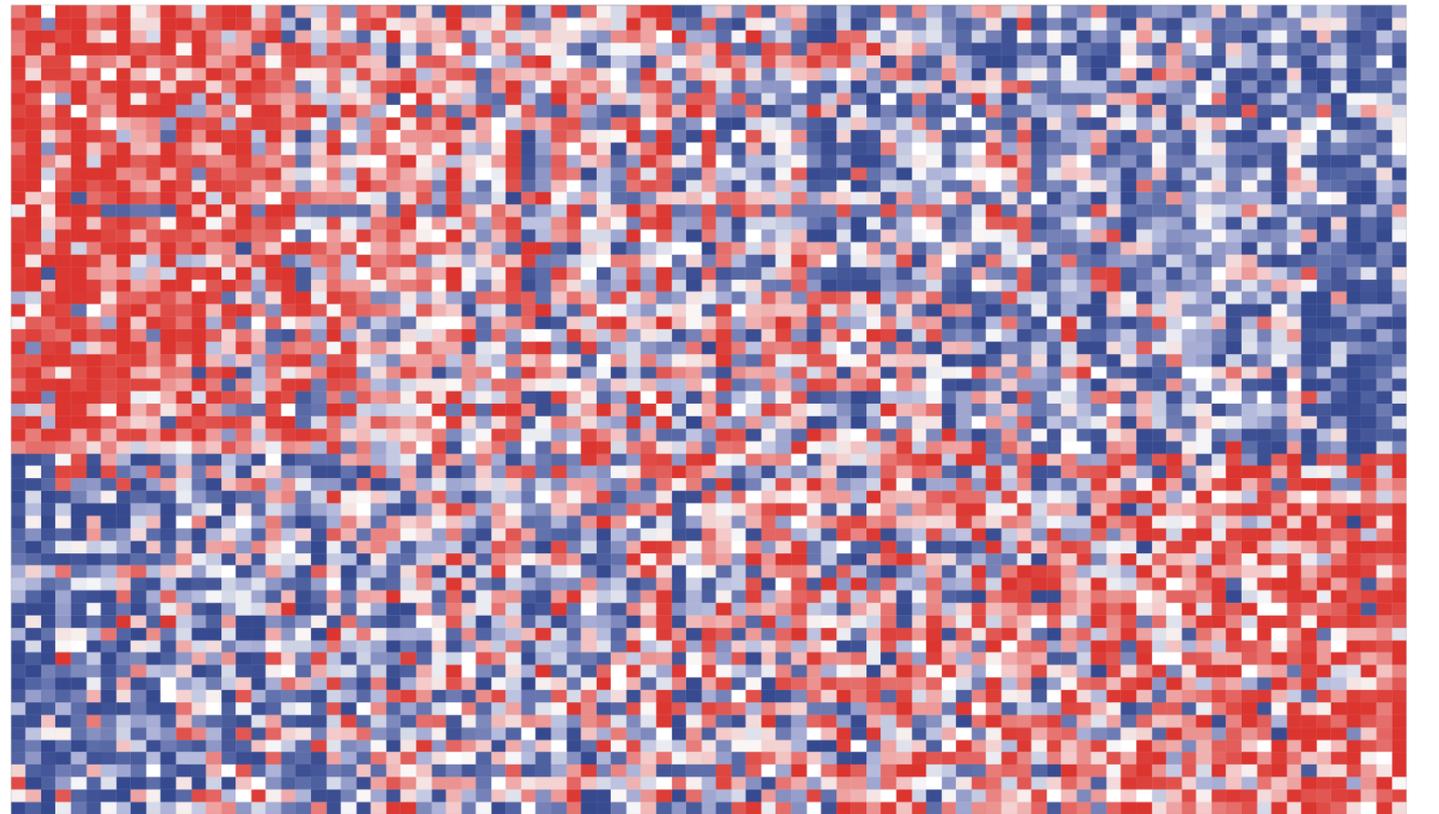
Amostras com alteração cromossômica (CGH)

Amostra sem CGH

X1_50404669.Cy3
X1_3018237.Cy5
X1_3028529.Cy5
X1_5013500.Cy3
X2_6035710.Cy3
X1_7081420.Cy3
X1_17038240.Cy5
X1_73019518.Cy5
X1_2049678.Cy5
X2_40222386.Cy5
X1_1051989.Cy5
X1_3049710.Cy5
X1_97014880.Cy3
X4_5001870.Cy3
X1_3008922.Cy3
X3_6036880.Cy5
X1_4031130.Cy5
X1_333391.Cy3
X2_4018664.Cy3
X1_99027283.Cy5
X1_7135230.Cy3
X2_5021944.Cy3
X1_6013163.Cy3
X2_4028284.Cy3
X2_60236437.Cy3
X3_6023754.Cy5
X2_8069470.Cy3
X2_8040411.Cy3
X3_6033903.Cy3
X5_6001281.Cy3
X1_6027954.Cy5
X3_4044550.Cy3
X4_3023222.Cy3
X3_7058180.Cy5
X4_7134550.Cy3
X3_3012662.Cy5
X3_6036708.Cy3
X5_1007459.Cy5
X3_2014696.Cy3
X4_6052320.Cy5
X1_7096620.Cy5
X2_4034031.Cy5
X3_6097117.Cy3
X1_2033739.Cy5
X4_4036913.Cy3
X4_6021085.Cy5
X2_4024524.Cy5
X2_7032050.Cy3
X3_7082500.Cy3
X3_5035104.Cy3
X4_14150.Cy3
X3_1001035.Cy3
X2_46264.Cy5
X3_6019234.Cy3
X4_4049993.Cy3
X4_3022162.Cy5
X3_3094760.Cy5
X5_3024822.Cy5
X2_2030160.Cy5
X5_4038231.Cy3
X2_5046645.Cy5
X2_1040847.Cy5
X5_5024030.Cy3
X1_5010047.Cy3
X2_5030390.Cy3
X3_5047145.Cy3
X2_6010113.Cy3
X3_7051620.Cy5
X5_4024435.Cy5
X3_2003864.Cy3
X3_3094760.Cy5
X3_5002389.Cy3
X2_3019853.Cy3
X3_6038174.Cy5
X5_4039700.Cy3
X4_5022371.Cy5
X2_5019923.Cy5
X2_1021605.Cy5
X3_6051880.Cy5
X2_6047947.Cy3
X3_7002386.Cy5
X2_4038398.Cy5
X3_42889.Cy5
X4_2016796.Cy5
X3_6044219.Cy5
X3_6044219.Cy5
X2_2028624.Cy5

ncRNA_ Transcritos intrônicos e intergênicos
Genes codificadores de proteína

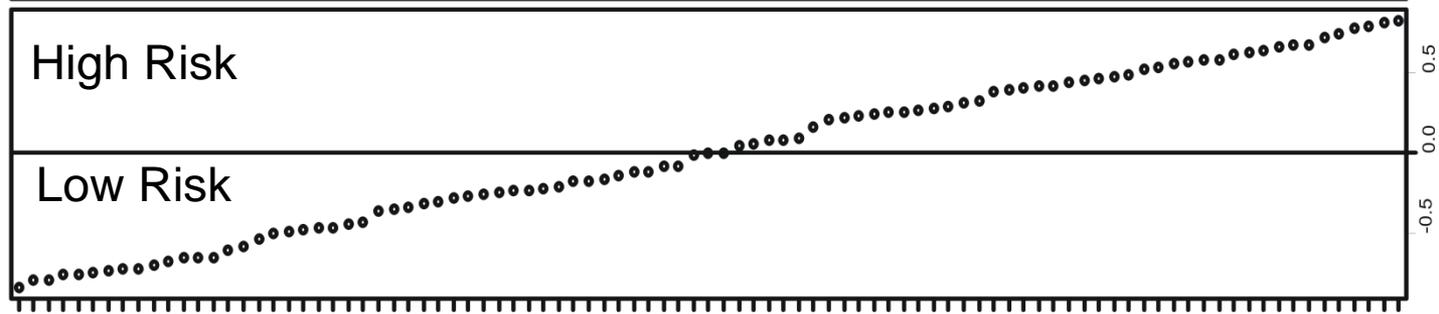
A_23_P96191
A_24_P204574
A_23_P136753
KRT13 A_24_P228149
GSTM1 A_23_P115407.1
A_32_P171225
A_23_P136026
A_24_P358321
PLA2G2D A_24_P111271
A_32_P30075
A_23_P21800
A_32_P157927
A_23_P61042
A_24_P318990
A_32_P722809
GSTM1 A_23_P115407.7
TNFRSF17 A_23_P37736
A_24_P168973
A_23_P435390
GSTM1 A_23_P115407.6
TCF7 A_23_P7582.19
A_24_P852001
A_24_P229447
A_24_P839530
GSTM1 A_23_P115407.4
A_32_P234405
GABRP A_23_P328545
GSTM1 A_23_P115407.5
A_24_P610945
SDS A_24_P304439
KRT15 A_23_P27133
A_24_P24371
SAA1 A_24_P335092
A_32_P39440
EFS A_23_P48561
CD44 A_23_P24870.4
ri_Q5_P168455
CHN2 s_Q5_P138433
PDE1A s_Q5_P132670
SLC13A3 s_Q5_P101266
BRP44 s_Q5_P125104
ig_Q5_P165943
PLXDC1 as_Q5_P018760
LUZP2 s_Q5_P071763
SEC62 s_Q5_P090178
COMT as_Q5_P037634
ig_Q5_P166258
ri_Q5_P169225
SHPRH s_Q5_P091343
ig_Q5_P163993
KDM4C s_Q5_P104101
ri_Q5_P167957
HGS as_Q5_P030684
AKT3 s_Q5_P085972
PBX1 s_Q5_P070381
LOC100132832 as_Q5_P022208
NCOA1 s_Q5_P093892
CACNA1D as_Q5_P009558
A_32_P232682
CHMP4C A_23_P432598
CLCN3 A_24_P402847
IMMP2L s_Q5_P126236
MLLT11 A_23_P23346
A_24_P376139
A_32_P174214



Margin
Pre PSA > 10 ng/ml blood
GS ≥ 4+3
Recurrence



Correlation to Recurrence profile



Análise de sobrevida – Alto e baixo risco baseados em expressão gênica

