



**Azienda Ospedaliero – Universitaria  
Perugia**

**S.C. di Anatomia ed Istologia Patologica**

Dir.: Prof . A. Sidoni

**S. S. Dip. Breast Unit**

Resp.: Prof. A. Rulli

**4° Incontro  
italo – francese  
sul carcinoma  
mammario**

**Prof. Antonio Rulli**

**Hotel Giotto – 22,23 novembre 2013 - Assisi**



# Azienda Ospedaliera-Universitaria di Perugia

## S.S.D. Breast Unit

*Responsabile: Prof. Antonio Rulli*

## S. C. di Anatomia ed Istologia Patologica

*Direttore: Prof. Angelo Sidoni*

	Metodica OSNA (12/12/12 – 15/11/2013)
N° casi totali con linfonodo sentinella	190
Casi N+	<b>59 (31,1%)</b>
Macrometastasi	25 (42,4%)*
Micrometastasi	<b>34 (57,6%)**</b>

\* Di cui 11/25 con linfonodi ascellari positivi (44%)

\*\* Di cui 8/30 con linfonodi ascellari positivi (**26,7%**)



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<b>Tra 250 e 2000 copie/microlitro</b>	<b>Tra 2000 e 5000 copie/microlitro</b>
24 (70,6%)	10 (29,4%)
<b>Linfadenectomia positiva casi con micromestastasi</b>	8 (23,5%)
<b>Tra 250 e 2000 copie/microlitro</b>	4 (50%)
<b>Tra 2000 e 5000 copie/microlitro</b>	4 (50%)



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<b>Casi con sottotipo molecolare Luminal A</b> (ER+, PR+; HER2-; Ki67<14%)	<b>14</b>
Tra 250 e 2000 copie/microlitro	<b>9</b> (1 con micrometastasi ascellare) <b>11 %</b>
Tra 2000 e 5000 copie/microlitro	<b>5</b> (3 con met. ascellari, di cui 1 con ITC) <b>60 %</b>



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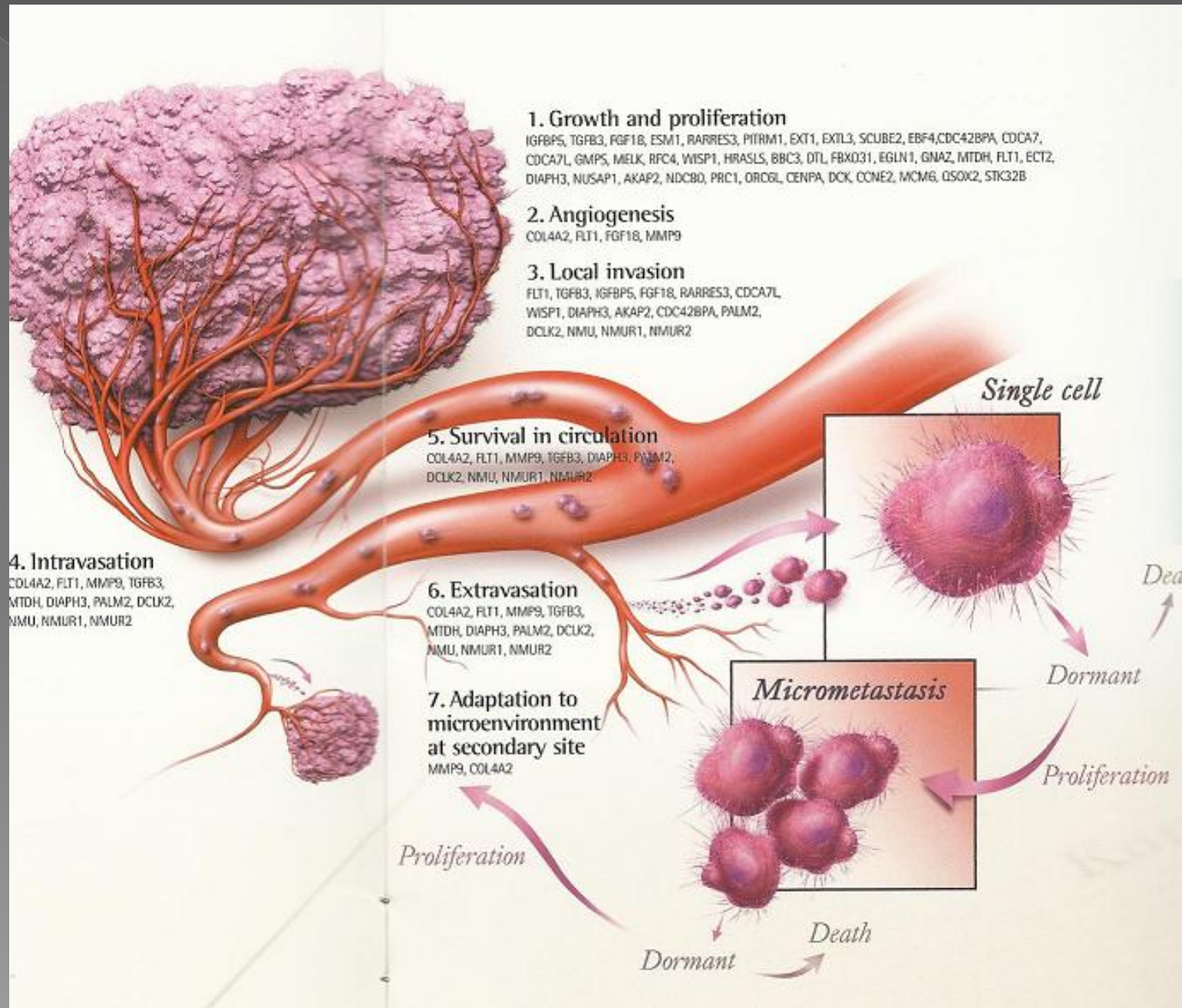
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<b>Casi con sottotipo molecolare Luminal A</b> (ER+, PR+; HER2-; Ki67<14%)	<b>micrometastasi</b>
Tra 250 e 2000 copie/microlitro	<b>NO DISSEZIONE</b>
Tra 2000 e 5000 copie/microlitro + No Luminal A	<b>DISSEZIONE</b>



# AZIENDA OSPEDALIERA – UNIVERSITARIA PERUGIA

## PERCORSO pz. L.S. -

Visita Chirurgica



complet. esami

diagnosi

Inser. lista d'attesa  
Pren. Vis. Anestes.

Compil. Lista operatoria  
Fax: Sala operatoria  
Anestesisti  
Anat. Patolog.

**Ricovero:**

**ore 07,30**  
accettazione  
cartella clinica  
prelievo fatt. biol.  
linfoscintigrafia  
sala operatoria



L.S. +: dissezione ascella

L.S. - : fine chirurgia

L. S.

posta pneumatica



Rete. BUN



osna

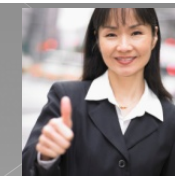
30 min.



Patologo

event. P.B.I.  
reparto  
controllo

**Dimissione**



**ore 17,30**

Azienda Ospedaliera – Universitaria di Perugia

**S.S.Dip. BREAST UNIT**

2011 – 2012 – 2013

**2004 interventi**

degenza pre operatoria **0,4 gg**  
degenza post operatoria **1,6 gg**





**GRAZIE**

**Dipartimento di Scienze Chirurgiche**  
**S.S. Dip. Breast Unit**  
*Resp. Prof. A. Rulli*

**2000 – 2009**

**912 BIOPSIE DEL LINFONODO SENTINELLA**

<b>N. Totale Pazienti</b>	<b>912</b>
SLN (-)	684 (75%)
SLN (+)	228 (25%)



- **SINGOLA STRUTTURA**
- **UNICA EQUIPE CHIRURGICA**
- **UNICO GRUPPO MULTIDISCIPLINARE**

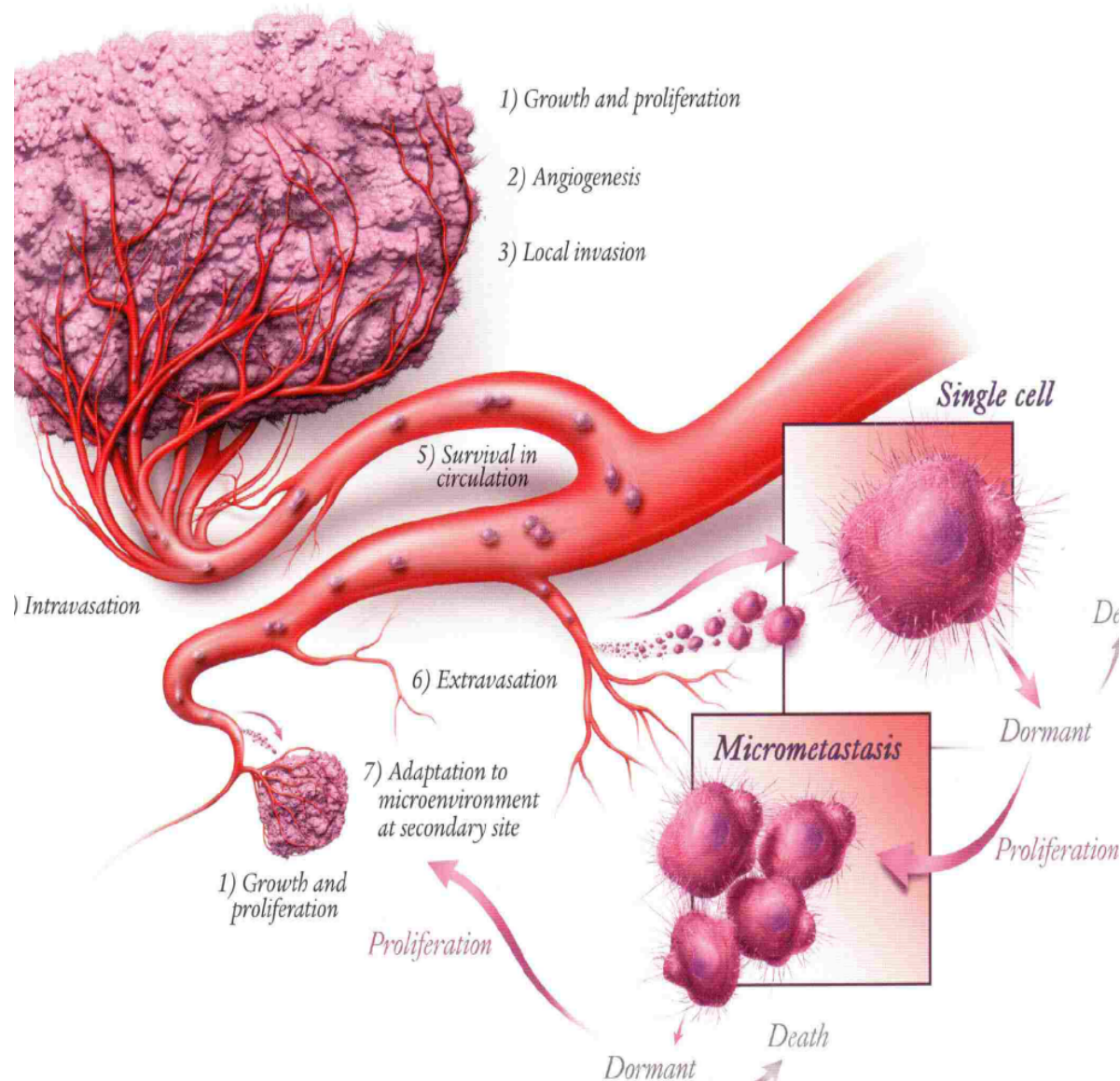
**Dipartimento di Scienze Chirurgiche**  
**S.S. Dip. Breast Unit**



**NOSTRE INDICAZIONI ALLA DISSEZIONE ASCELLARE**

<b>ITC</b>	<b>MICRO</b>
<b>MULTIFOCALI</b> <i>(Masci et al, 2009)</i>	<b>MULTIFOCALI</b> <i>(Masci et al, 2009)</i>
<b>ISTOLOGIA LOBULARE</b> <i>(Mittendorf et al, 2008)</i>	<b>DIAMETRO &gt; 1 mm</b> <i>(Viale et al, 2001)</i>
<b>PROFONDA INVASIONE DEL PARENCHIMA</b> <i>(Van Duerzen, 2008)</i>	<b>LOCALIZZAZIONE NEL SENO (CXCR4 - / CCR7 -)</b> <i>(Masci et al, 2009)</i>

The MammaPrint® gene expression profile interrogates all of the critical genomic pathways associated with breast cancer recurrence; from tumor progression through the metastatic cascade.



Adapted from McGee et al., EMBO reports 7, 11, 1084–1088 (2006)  
doi:10.1038/sj.embor.7400839 AOP Published online: 20 October 2006

## MammaPrint® Gene Expression Profile

BIOLOGICAL FUNCTION	GENE NAME	GENE DESCRIPTION
Metabolism	ALDH4A1	aldehyde dehydrogenase 4 family, member A1
	AYTL2	acyltransferase like 2
	OXC11	3-oxoacid CoA transferase 1, nuclear gene encoding mitochondrial protein
	PECI	peroxisomal D3,D2-enoyl-CoA isomerase, transcript variant 2
	GMPS	guanine monophosphate synthetase
	GSTM3	glutathione S-transferase M3
	SLC2A3	solute carrier family 2, (facilitated glucose transporter), member 3
Cell cycle and DNA replication	CENPE	centromere protein A, 17kDa
	CENPA	centromere protein A, 17kDa
	LIN9	lin-9 homolog
	KNTC2	kinetochore associated 2
	MCM6	MCM6 minichromosome maintenance deficient 6
	NUSAP1	nucleolar and spindle associated protein 1, transcript variant 2
	ORC6L	origin recognition complex, subunit 6 like
	PRC1	protein regulator of cytokinesis 1, transcript variant 2
	RFC4	replication factor C 4, 37kDa, transcript variant 2
	RECQL5	RecQ protein-like 5
Extracellular matrix adhesion and remodeling	CDC47	cell division cycle associated 7, transcript variant 1
	DTL	denticleless homolog
	COL4A2	collagen, type IV, alpha 2
	GPR180	G protein-coupled receptor 180
	MMP9	matrix metalloproteinase 9
Growth, proliferation, transformation and cell death	GPR126	G protein-coupled receptor 126, transcript variant b2
	RTNHR1L	reticulon 4 receptor-like 1
	BBC3	BCL2 binding component 3
	ECT2	epithelial cell transforming sequence 2 oncogene
	QSOX1	quiescin Q6-like 1
	STK32B	serine/threonine kinase 32B
	GRH12	transcription factor (TF)-like 3
	RASSF7	Ras association (RaKOS/AF-6) domain family 7
	RUNDC1	RUN domain containing 1
	DCK	deoxycytidine kinase
	FLT1	fms-related tyrosine kinase 1
	EGLN1	egl nine homolog 1
	EXT1	exostosin 1
	GNAZ	guanine nucleotide binding protein, alpha 2 polypeptide
	HRA5L5	HRA5-like suppressor
General signal transduction and intracellular transport	EBF4	early B-cell factor 4
	MELK	maternal embryonic leucine zipper kinase
	MTDH	metadherin
	PITRM1	pitrilysin metalloproteinase 1
	AP2B1	adaptor-related protein complex 2, beta 1 subunit, transcript variant 1
Growth factors	MSA47	membrane-spanning 4-domains, subfamily A, member 7, transcript variant 3
	RAB6B	RAB6B, member RAS oncogene family
	ESM1	endothelial cell-specific molecule 1
	IGFBP5 (1)	insulin-like growth factor binding protein 5
	IGFBP5 (2)	insulin-like growth factor binding protein 5
Motility or actin filament organization	FGF18	fibroblast growth factor 18
	SCUBE2	signal peptide, CUB domain, EGF-like 2
	TGFB3	transforming growth factor, beta 3
	WISP1	WNT1 inducible signaling pathway protein 1, transcript variant 1
	DIAPH3 (1)	diaphanous homolog 3, transcript variant 1 (Exon 29)
Intracellular hydrolase	DIAPH3 (2)	diaphanous homolog 3, transcript variant 2 (Exon 23)
	DIAPH3 (3)	diaphanous homolog 3 (Exon25 and Exon26)
	CDC42BPA	CDC42 binding protein kinase alpha, transcript variant B
	PALM2	paralemmin 2
	UCHL5	ubiquitin carboxyl-terminal hydrolase L5
Predicted transcriptional control or DNA binding proteins	LGP2	likely ortholog of mouse D111gp2
	NPY	neuropeptide Y
	CT6orf61	chromosome 16 open reading frame 61
	ZNF533	zinc finger protein 533
	TSPYL5	TSPY-like 5
Predicted transmembrane protein with unknown function	JHDM1D	jumonji C domain containing histone demethylase 1 homolog D
	C9orf30	chromosome 9 open reading frame 30
	C20orf46	chromosome 20 open reading frame 46
	SERP1A	small EDRK-rich factor 1A
	LOC730018	similar to hCG1980668
Unknown function	Map3.0_2K_00341	previously annotated in NCBI as NM_006117(PECI)
	LOC100131053	hypothetical LOC100131053
	AASS5029_RC	no significant similarity found