

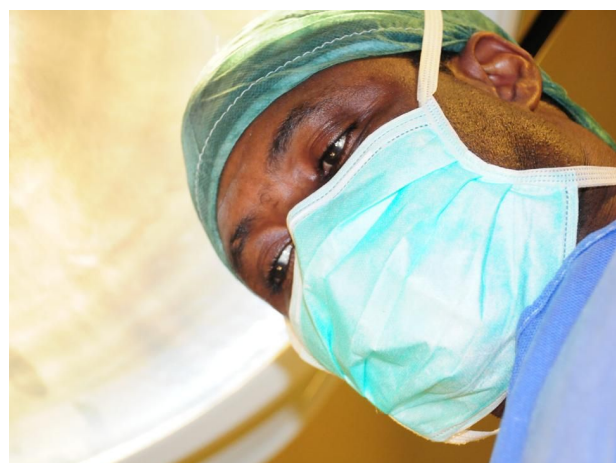


Francesco Guarnieri MD

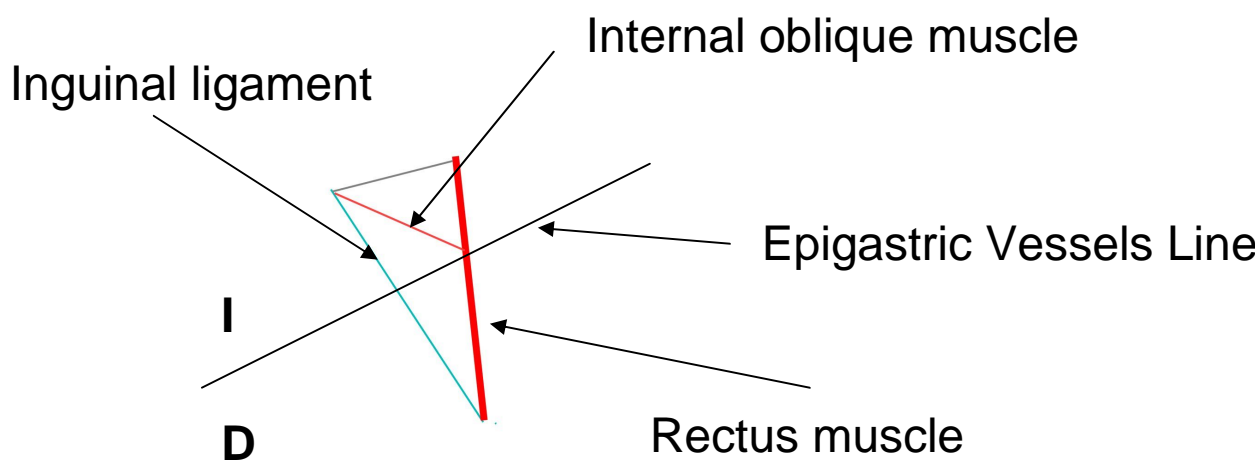


# A NEW HERNIA CLASSIFICATION

Francesco Guarnieri MD; Calistus Nwamba MD  
Guarnieri Hernia Center – via del nuoto 1 – 00194 Rome Italy  
[guarnieri.hernia.center@gmail.com](mailto:guarnieri.hernia.center@gmail.com)  
[www.guarnieriherniacenter.com](http://www.guarnieriherniacenter.com)



Nwamba Calistus MD



In recent time, different surgeons have attempted to classify the groin hernias (Nyhus, Zollinger, Aachen, Bendavid, Schumpelick , etc) with different criteria like the size of the hernia, it's location and the diameter of the internal inguinal ring. The European Hernia Society has tried to put together all these parameters in order to produce an “easy to remember” classification. In our opinion, we are convinced that this classification is still not complete since some salient points in the description of the groin hernia for a practising surgeon are still missing.

In our study and with our clinical experience, we tried to classify groin hernias taking into consideration the logic of “simple to apply and easy to remember” concept. **In reviewing all the existing classifications, we noticed that no mention was made regarding the position of the hernia in the posterior wall in direct hernia and that mixed hernias were not well represented hence our conviction for a new classification.**

We identified five major types of groin hernias:

TYPE	SUBTYPE	DESCRIPTION	GHC	EHS
I	A(1) = Small Indirect B(2) = Large Indirect C(3) = Very Large Indirect	SINGLE INGUINAL INDIRECT	I	L
II	A(1) = High Direct B(2) = Low Direct C(3) = Total Direct	SINGLE INGUINAL DIRECT	D	M
III	A(1) = Indirect + Direct B(2) = Direct + Indirect C(3) = Femoral anterior > 2	MULTIPLE MIXED INGUINAL FEMORAL	M	
IV		FEMORAL	F	F
V	A(1) = High B(2) = Low C(3) = Total D(4) = Multiple	RECURRENT INGUINAL FEMORAL	R	R

Indirect hernia (I).  
Direct hernia (D).  
Mixed hernia (M).  
Femoral hernia (F).  
Recurrent hernia (R).

We completely agree on the subdivision of indirect hernia according to the size of the hernia, its position within the inguinal canal and the diameter of the internal inguinal ring. **What is new in our classification is the consideration of the position of the hernia in respect of the posterior wall in direct and recurrent hernias.** From our own point of view, this can be either high, low or complete.  
In practical analysis, our classification is represented as follows:

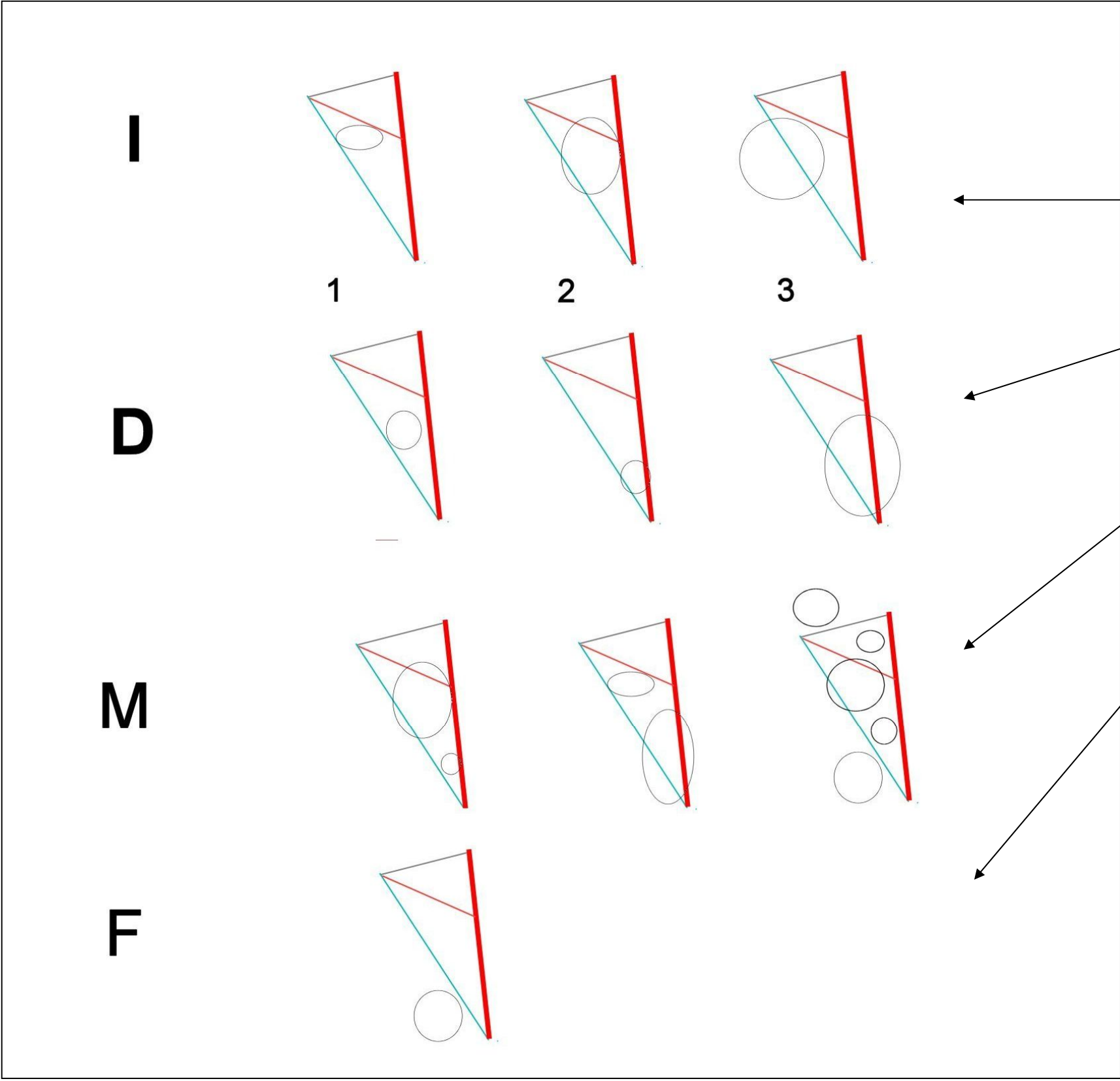
Type	Subtype
I (indirect hernia)	1 (bulging of the hernia sac within the initial tract of the spermatic cord but not extending to the inguinal canal and/o the internal inguinal ring less than 2 cm in diameter). 2 ( hernia sac contained in the spermatic cord and occupying the inguinal canal and/o the diameter of the internal inguinal ring between 2cm and 3cm). 3 ( hernia sac that exceeds the inguinal canal and extends into the scrotum and/o the diameter of the internal inguinal ring more than 3 cm).
D (direct hernia)	1 ( hernia close to the internal ring and occupying not more than 1/3 of the posterior wall) 2 (hernia close to the pubic tubercle and occupying not more than 1/3 of the posterior wall) 3 (large hernia occupying almost the entire posterior wall)
F (femoral)	0 (no femoral hernia) 1 (femoral hernia) x (femoral region not explored)
M (mixed hernia)	1 (prevailing external oblique + direct hernia) 2 (prevailing direct + external oblique) 3 More than two hernias (with or without a femoral hernia)
R (recurrent hernia)	1 high recurrent hernia (1/3 superior see direct hernia) 2 low recurrent hernia (1/3 inferior see direct hernia) 3 total recurrent hernia 4 multiple recurrent hernia (more than one hernia opening)

In this way the surgeon can use the combination of these numbers and letters to properly describe the type of hernia during surgery.  
**Example:** I2D3F0 stands for a mixed hernia (indirect and direct) with the indirect component laying on the inguinal canal and the direct component occupying the entire posterior wall also classified as M2 because the direct hernia is predominant.

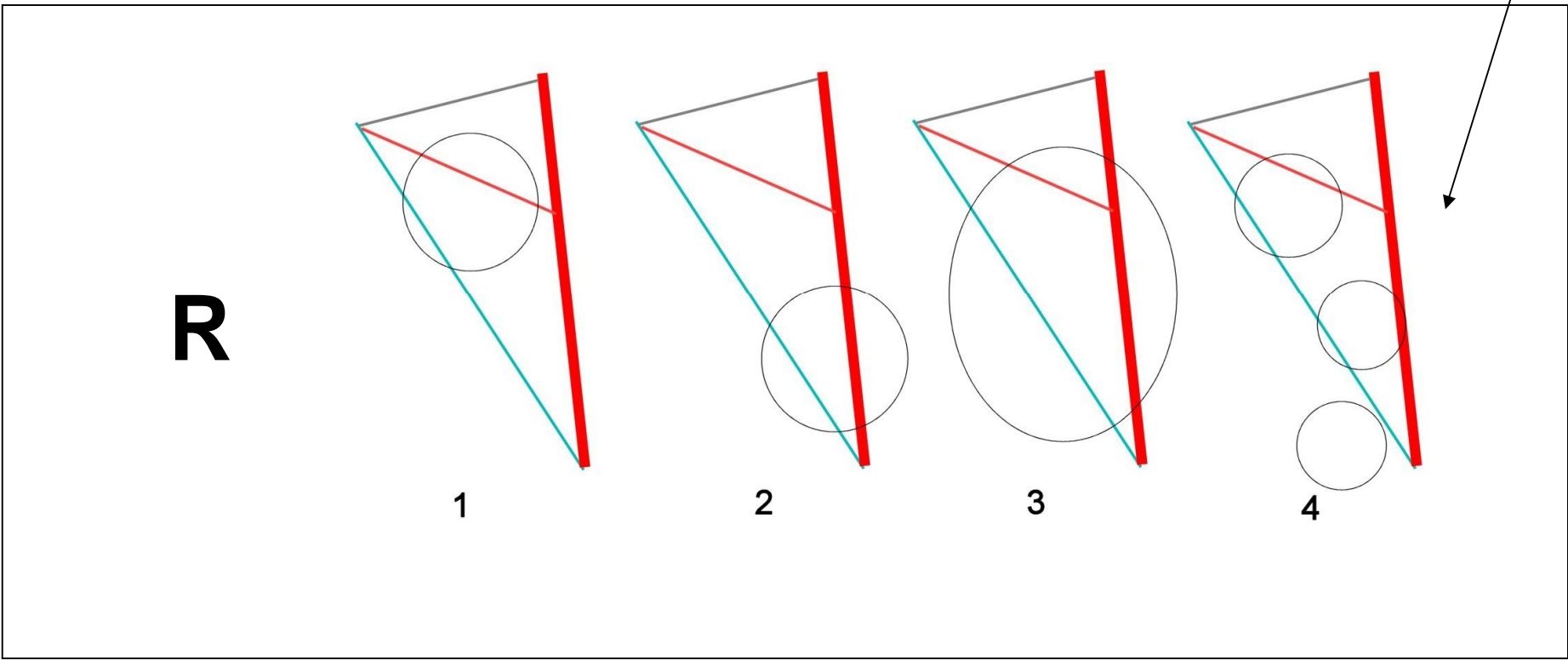
	I	D	M	F	R
0					X
1					X
2	X		X		
3		X			
X					

The use of this classification is functional when a different surgical technique is applied based on the diagnosis.

## GHC Primary Groin Hernia Classification



## GHC Recurrent Hernia Classification



## EHS Hernia Classification

P = primary hernia  
R = recurrent hernia

0 = no hernia detectable  
1 = < 1,5 cm (one finger)  
2 = < 3 cm (two fingers)  
3 = > 3 cm (more than two fingers)  
x = not investigated

L = lateral/ indirect hernia  
M = medial/ direct hernia  
F = Femoral hernia

		P	R			
		0	1	2	3	x
L						
M						
F						

### GHC GROIN HERNIA CLASSIFICATION

	I	D	M	F	R
0					
1					
2					
3					
X					