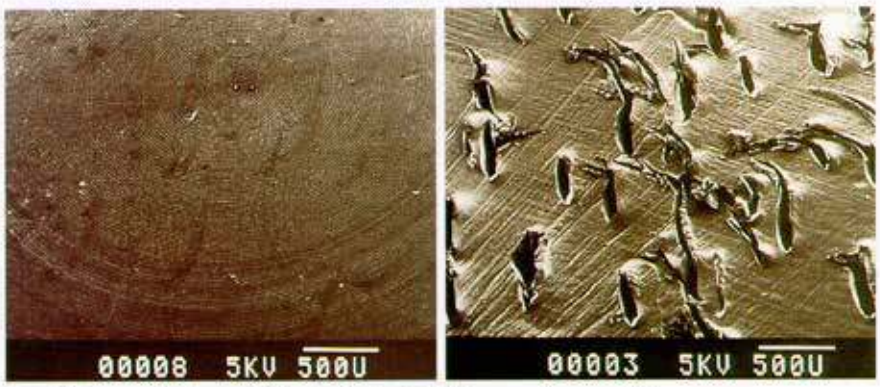
Plastic vs Hybrid Ports

- 70% of Bard ports on the market are in **FULL PLASTIC**
- **Plastic reservoir vs Titanium**
  Internal in vitro study: TITANIUM housing versus **PLASTIC** after repeated punctures

SEESITE® 4018SEE
Vygon Medical

(Titanium housing)



Fondo di camera in titanio (SN) e in plastica (DX) dopo uso ripetuto (30X)

PowerPort®
MRI - Bard

(Plastic housing)

Figure 1: Difference in surface state x 147 optical magnification

Results:

- Impact traces were definitively more visible with the plastic surface than with the metallic surface
- Plastic housing accumulates markings caused by needle impacts = difficulty flushing/ cleaning properly
- Medium term risks: Residual products may aggregate on the damaged surface and cause interaction with other drugs (crystallisation), blood clot or bacterial adherence.

INTRAVASCULAR THERAPIES

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Plastic vs Hybrid Ports

Plastic reservoir vs Titanium

- ePoster at AVA conference 2018, Laetitia VIN: Particulate matters in implantable ports: influence of port materials and punctures by Huber needles.

"The objective of this in vitro study is to **compare particulate matters (extrinsic particles quantity) generated by multiple punctures with Huber Needles in Plastic ports and in Hybrid ports with Ti reservoir.**

	Quanity of counted particles	Quantity of particles generated by punctures	Ratio Quantity generated with Plastic ports/ Polysite Hybrid ports with titanium reservoir)
Polysite Hybrid port before punctures (titanium reservoir)	3 467.5	1380	5.17
Polysite Hybrid port after punctures (titanium reservoir)	4 847.5		
Plastic port before punctures (plastic reservoir)	44 471	7140	
Plastic port port after punctures (plastic reservoir)	51 611		

Results:

- Whatever the reservoir material, the 48 punctures representative of clinical use generate particulate matters. The mean quantity generated is 5.2 times higher with Plastic ports than with Hybrid ports with titanium reservoir.

"Beyond the amount of particles generated, **the toxicities associated with particulate matter exposure via intravenous route could lead to physiological complications"** (embolism by mechanical blockage, inflammation, microthrombi formation, potential to cause phagocytic overload and may lead to secondary infections).

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