KAROLINSKA Universitetssjukhuset

CONTROVERSIES & UPDATES IN VASCULAR SURGERY
Paris, France Jan 23-25 2020

Karolinska Institutet

AV FISTULA – STATE OF THE ART

EUROPEAN GUIDELINES

ULF HEDIN

DEPARTMENT OF VASCULAR SURGERY

KAROLINSKA UNIVERSITY HOSPITAL

STOCKHOLM, SWEDEN

OTHER GUIDELINES

- K-DOQI
  - 1997, 2006
  - REVISION IN PROGRESS => 2020 (CACVS 2019; C LOK)
  - 130 => 163 STATEMENTS/RECOMMENDATIONS [<=> ESVS 80]
  - 33% LEVEL A-B; 66% LEVEL C
- ERA-EDTA-EBP
- MISC
  - CLINICAL PRACTICE GUIDELINE: VASCULAR ACCESS FOR HAEMODIALYSIS, UK RENAL ASSOCIATION 2015
  - SPANISH CLINICAL GUIDELINES ON VASCULAR ACCESS FOR HAEMODIALYSIS, 2017

National Kidney Foundation®

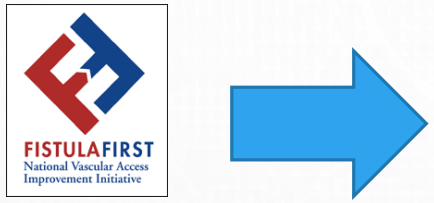
KDIGO

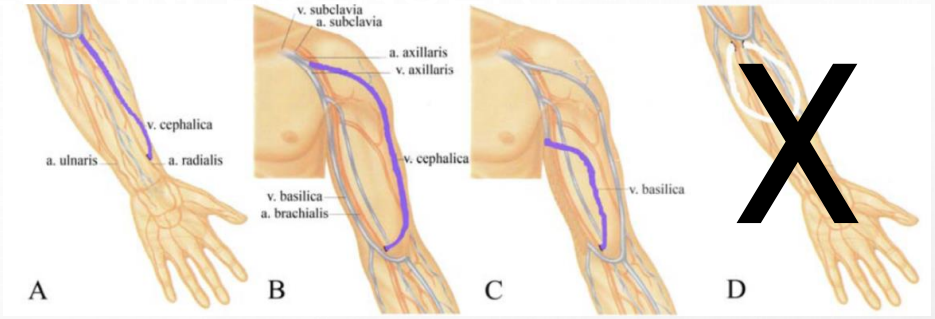
Canadian Society of Nephrology/
Société canadienne de néphrologie
CSN/SCN

THE RENAL ASSOCIATION
founded 1950

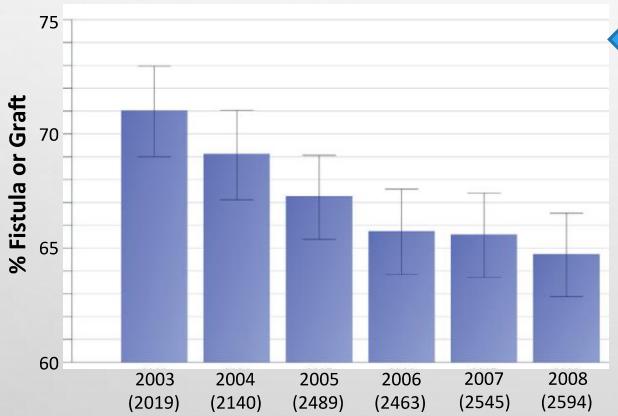
REASONS TO DEVELOP YOUR OWN

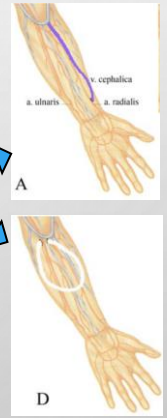
- K-DOQI, FISTULA FIRST ETC.





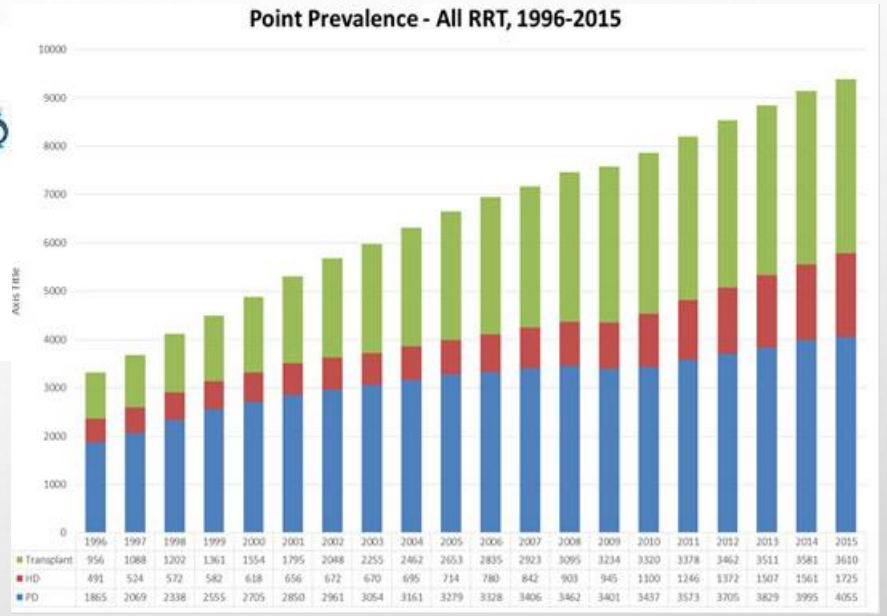
- AVF VS. AVG
  - 2004 SWEDEN 10-15% AVG

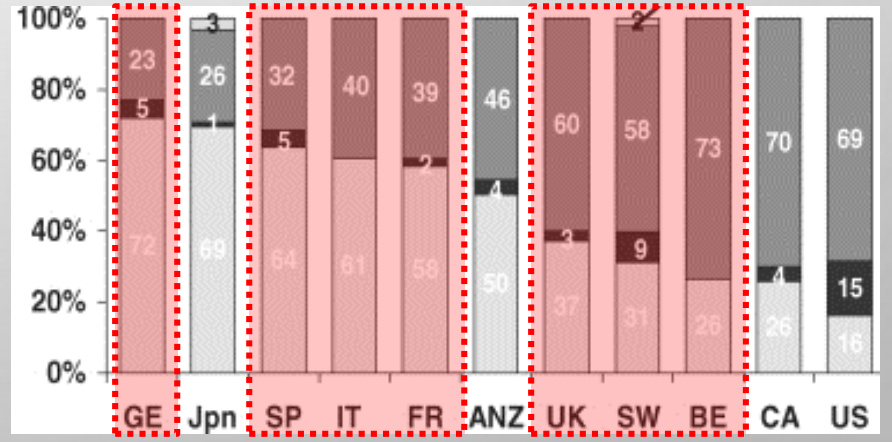




WHY?

- INCREASINGLY IMPORTANT FOR VASCULAR SURGERY
  - NEPHROLOGISTS=>UROLOGISTS TRANSPLANT SURGEONS=>VASCULAR SURGEONS=>ACCESS SURGEON (AV ACCESS-CATHETERS-PD'S-OPEN/ENDO)
- INCREASING DEMAND FOR RRT
- VARIABILE PRACTISE IN EUROPE
- TRAINING





GUIDELINE PROCESS

- STARTED IN 2013
- PUBLISHED IN 2018
- WRITING GROUP: 19 AUTHORS FROM 10 DIFFERENT COUNTRIES
- MULTIDISCIPLINARY REPRESENTATION FROM: VASCULAR SURGERY, TRANSPLANTATION, DIALYSIS NURSING, NEPHROLOGY, INTERVENTIONAL RADIOLOGY, IMAGING
- ESVS GUIDELINE COMMITTE

Eur J Vasc Endovasc Surg (2018) 55, 757–818

Editor's Choice – Vascular Access: 2018 Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS)☆

Jürg Schmidli [a,*], Matthias K. Widmer [a], Carlo Basile [a], Gianmarco de Donato [a], Maurizio Gallieni [a], Christopher P. Gibbons [a], Patrick Haage [a], George Hamilton [a], Ulf Hedin [a], Lars Kamper [a], Miltos K. Lazarides [a], Ben Lindsey [a], Gaspar Mestres [a], Marisa Pegoraro [a], Joy Roy [a], Carlo Setacci [a], David Shemesh [a], Jan H.M. Tordoir [a], Magda van Loon [a],

ESVS Guidelines Committee [b], Philippe Kolh, Gert J. de Borst, Nabil Chakfe, Sebastian Debus, Rob Hinchliffe, Stavros Kakkos, Igor Koncar, Jes Lindholt, Ross Naylor, Melina Vega de Ceniga, Frank Vermassen, Fabio Verzini,

ESVS Guidelines Reviewers [c], Markus Mohaupt, Jean-Baptiste Ricco, Ramon Roca-Tey

Citations <100

CONTENT

1. METHODOLOGY, DEFINITION OF **VASCULAR** ACCESS
2. EPIDEMIOLOGY OF CKD AND AV ACCESS
3. CLINICAL DECISION MAKING
4. PRE-OP IMAGING
5. CREATION OF VASCULAR ACCESS
6. SURVEILLANCE OF VASCULAR ACCESS (CANNULATION, ACCESS MONITORING AND SURVEILLANCE, NURSING ORGANIZATION)
7. LATE VASCULAR ACCESS COMPLICATIONS (ACCESS ANEURYSMS, INFECTION, STENOSIS, THROMBOSIS, VASCULAR ACCESS INDUCED LIMB ISCHAEMIA AND HIGH FLOW VASCULAR ACCESS)
8. COMPLEX OR TERTIARY HAEMODIALYSIS VASCULAR ACCESS
9. GAPS IN THE EVIDENCE

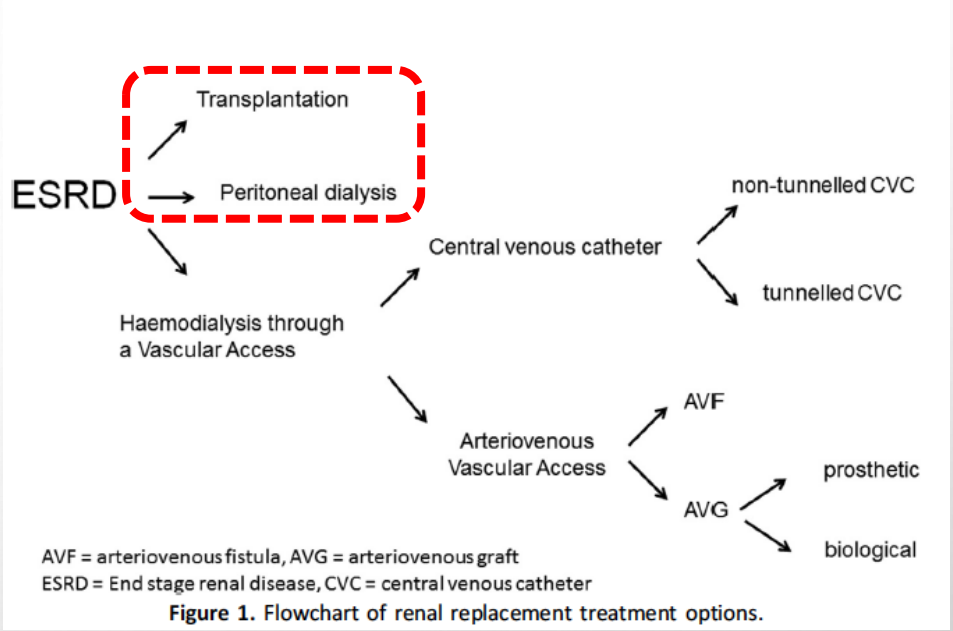
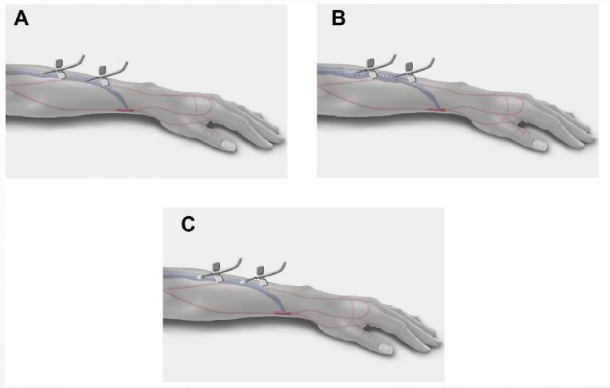
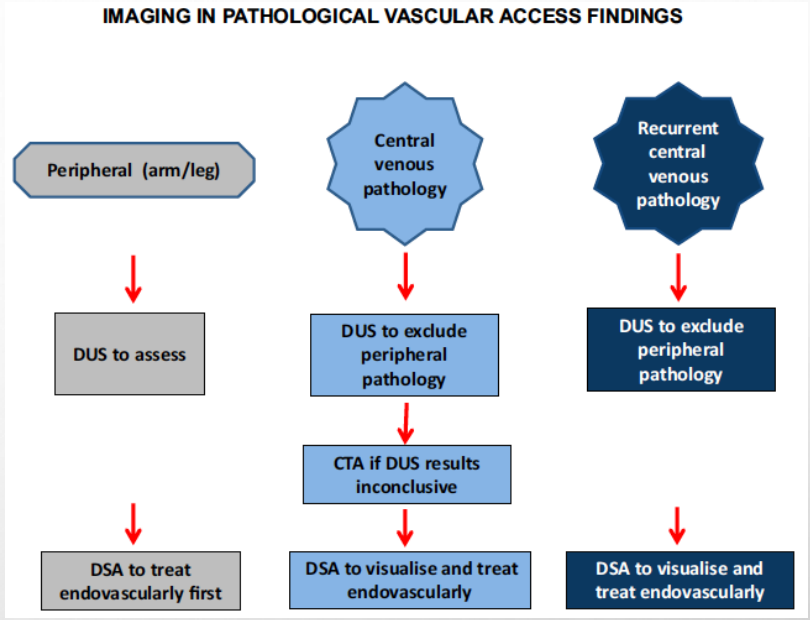


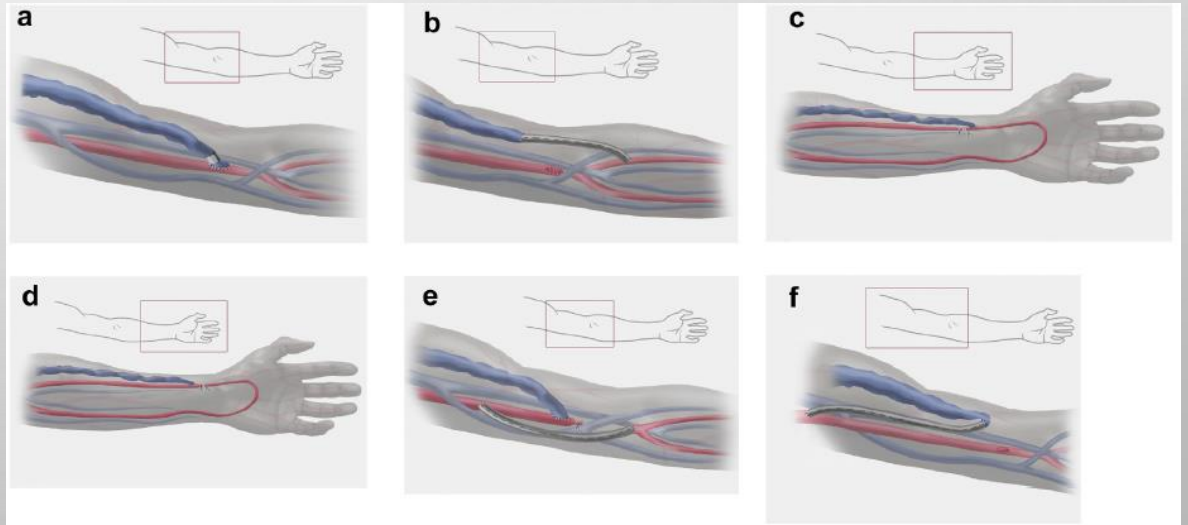
Figure 1. Flowchart of renal replacement treatment options.

WHAT'S USEFUL?

- WELL STRUCTURED
- MULTIDISCIPLINARY PERSPECTIVE
  - DIALYSIS, NEEDLING, SURVEILLANCE
- ALGORITHMS
- PROCEDURES FOR HAND ISCHEMIA AND HIGH FLOW ACCESS







LIMITATIONS

- FOR VASCULAR ACCESS SURGERY RATHER THAN DIALYSIS CARE
- POOR EVIDENCE BASE ('EVIDENCE FREE ZONES')
  - TREATMENT OF COMPLICATIONS
- RECOMMENDATIONS FOR VASCULAR/HEMODIALYSIS ACCESS ONLY
  - NOT FOR COMPLETE RRT/ACCESS (- PD)
- UP-TO-DATE?
  - 2013->2018
  - IDEAL <4 YEARS
- INDIVIDUALIZED ACCESS PLANNING?

Table 1. Level of evidence for treatment recommendations in ESVS guidelines.

	Vascular access	Carotid disease	Thoracic aorta	Mesenteric vessels
Level A	10%	24%	0%	3%
Level B	20%	30%	10%	30%
Level C	70%	47%	90%	67%
Total recommendations	80 (100%)	118 (100%)	86 (100%)	64 (100%)

REASONS TO LOOK INTO K-DOQI 2020 (WASSE NEXT TALK)

ESVS VA Guidelines 2018 ⟷ K-DOQI 2020

Recommendation 1	Class	Level
Referral of chronic kidney disease patients to the nephrologist and/or surgeon for preparing vascular access is recommended when they reach stage 4 of chronic kidney disease (glomerular filtration rate < 30 ml/min/1.73 m^2), especially in cases of rapidly progressing nephropathy.	I	C
Recommendation 2		
A permanent vascular access should be created 3–6 months before the expected start of haemodialysis treatment.	I	B
Recommendation 3		
An autogenous arteriovenous fistula is recommended as the primary option for vascular access.	I	A
Recommendation 4		
The radiocephalic arteriovenous fistula is recommended as the preferred vascular access.	I	B
Recommendation 5		
When vessel suitability is adequate, the non-dominant extremity should be considered as the preferred location for vascular access.	IIa	C
Recommendation 6		
A lower extremity vascular access should be considered only when upper extremity access is impossible.	IIa	C
Recommendation 7		
Tunnelled cuffed central venous catheters as a long standing haemodialysis modality should be considered when the creation of arteriovenous fistulas or grafts is impossible or in patients with limited life expectancy.	IIa	B

✓ Patient
✓ Life-Plan
✓ Access
✓ Needs

- **CREATION PLAN**
- **CONTINGENCY PLAN**
- **SUCCESSION PLAN**

Patient oriented

- Quality of life
- Longevity
- Home dialysis
- Economically feasible

DAVIDSON I, GALLIENI M, DOLMATCH B. A PATIENT CENTERED DECISION-MAKING DIALYSIS ACCESS ALGORITHM. J VASC ACCESS, 2007; 8: 59-68

LOK CE, DAVIDSON I. OPTIMAL CHOICE OF DIALYSIS ACCESS FOR CHRONIC KIDNEY DISEASE PATIENTS: DEVELOPING A LIFE PLAN FOR DIALYSIS ACCESS. SEMIN NEPHROL. 2012; 32:530-537

CONCLUSIONS

- ESVS VASCULAR ACCESS GUIDELINES
  - 'COOK-BOOK' IN VASCULAR ACCESS FOR VASCULAR SURGEONS
  - EDUCATIONAL MULTIDISCIPLINARY INSIGHTS
    - TRAINING
  - LESS IMPACT FOR DIALYSIS CARE
- SCIENTIFICALLY EVIDENCE-POOR FIELD
  - RESEARCH AND RCTS NEEDED
- TECHNOLOGY RAPIDLY ADVANCING
  - UPDATES NEEDED (<3-4 YEARS)
- IMPACT VS. K-DOQI 2020?

ESVS TRANSLATIONAL MEETING

Translational science – from bench to bedside

2 & 3 APRIL | 2020 Stockholm, Sweden



- Welcome to the **1st ESVS Translational Meeting** in collaboration with **ESVB** to promote **Translational Science in European Vascular Surgery @ Bioclinicum, Karolinska University Hospital.**
- This meeting aims to merge basic researchers, industry and physicians to provide scientific updates on burning issues in peripheral vascular disease (aneurysms, CVD Risk, thrombosis, restenosis, carotid disease), vascular biology, vascular biomaterials, education, imaging…
- Oral abstract presentations and posters with **Young Investigator Awards** and **Young Scientist Work Shop**

Extended Abstract Submission Deadline

↓

February 16th

Affordable Registration for Students

↓

€ 100

Abstract Submission & Registration OPEN

https://www.esvs.org/presentation/

Translational Vascular Science

April 2-3, 2020 Stockholm, Sweden